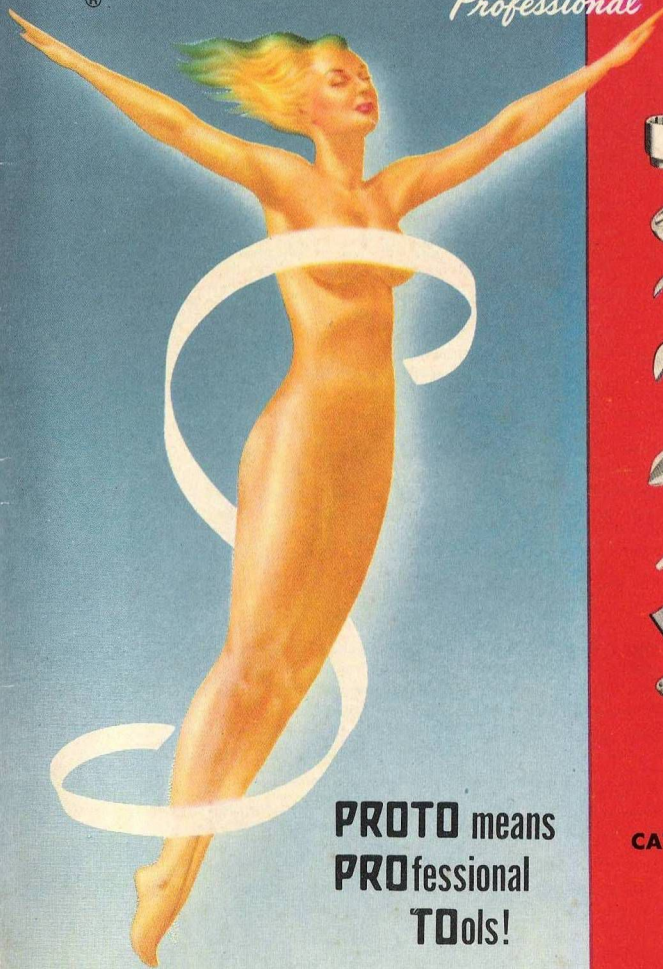


PROTO TOOLS

Professional Quality



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PROfessional
TOols!



CATALOG NO. C5428

CATALOG NO. C5428

with a Complete Listing of

Your
Guide

TO FINE HAND
SERVICE TOOLS
FOR



AUTOMOBILES
TRUCKS, BUSES



AIRPLANES
TRACTORS

FARM IMPLEMENTS



MACHINES
OTHER FACTORY
EQUIPMENT
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MINES
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Forging Ahead Through Leadership, Quality, Service and Understanding

WHERE TO BUY PROTO TOOLS—SEE PAGE 68

GUARANTEE

PROTO tools are guaranteed to perform the work for which they are designed, and to last as long as is consistent with ordinary wear. Any tool found defective in workmanship or material, and returned to the Factory with transportation charges prepaid, will be replaced, repaired or credited at current prices (as deemed best by us), provided it has been used for the purpose for which the tool was designed. • Power and impact sockets are designed for power equipment, but standard thin-wall sockets are not intended for such use. Special tools not listed in our catalog or price list do not carry the regular guarantee, because they have been manufactured to the original purchaser's specifications. Also, tools that have been ground or altered in any other manner from their original design are not covered by the guarantee.

SPECIAL TOOLS

In addition to the standard tools listed in this catalog, a great many types of special tools are made for manufacturers and other tool users. Inquiries are welcomed on tools of your own specifications, required to solve production or maintenance problems. To obtain more information on standard tools, special tools or any tool problem, see your PROTO tool distributor or write to our Contract Department, giving your name, position, company and address. When writing, ask for Special Tools Booklet No. 5328.

NOTICE

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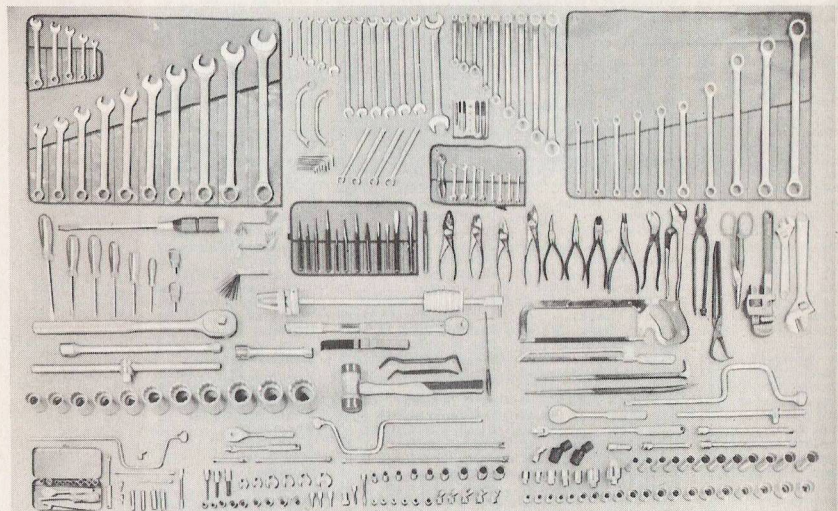
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Pages 58-59Punches, Chisels
& Extractors
Pages 60-61Plumbing Tools
Pages 62-63Tool Chests,
Boxes & Kits
Pages 64-67

NO. 9901 MASTER INDUSTRIAL SET



A very complete super set for all types of factory, utility, railroad, power plant, refinery and other industrial maintenance. Perfect also for mechanics who repair auto-

mobiles, trucks, buses, aircraft, tractors, farm implements, marine engines, construction equipment, etc. Includes the 264 items listed below. Weight, 121 lbs.

Contents of No. 9901 Set: 6 open end and 6 tappet wrenches; 10 box wrenches in kit; 15 combination box and open end wrenches in kit; 8 midjet open end wrenches and midjet plier in kit; 9 offset box, 2 obstruction box, 4 flare nut, 1 pipe and 2 adjustable wrenches; 2 power sockets in $\frac{1}{2}$ "

drive; 24 sockets and attachments in $\frac{1}{4}$ " drive, and box; 52 sockets, crowfoot wrenches and attachments in $\frac{3}{8}$ " drive; 46 sockets and attachments in $\frac{1}{2}$ " drive; 16 sockets and attachments in $\frac{3}{4}$ " drive; 12 pliers; snip; 9 screwdrivers; slide-hammer puller; 2 brake tools; muffler tool; valve

guide cleaner; carbon scraper; set of 7 Allen-type wrenches in kit; 3 gauge sets; 2 hacksaws; 2 bars; torque wrench; Nuplax hammer; 7 punches and 5 chisels in kit, and 5 extractors. The following table tells on which page of this catalog you will find the listing for each item in the set.

NO.	PAGE	NO.	PAGE	NO.	PAGE	NO.	PAGE	NO.	PAGE	NO.	PAGE	NO.	PAGE
3016.....	8	8181.....	15	4714L.....	26	5214S.....	28	4922.....	29	5431.....	31	5546.....	35
3018.....	8	8182.....	15	4737.....	26	5216S.....	28	4924.....	29	5434.....	31	5548.....	35
3020.....	8	8183.....	15	4738.....	26	5226.....	28	5000B (9		5436.....	31	5552.....	35
3021.....	8	8184.....	15	4770.....	26	5228.....	28	Items).....	30	5438.....	31	5556.....	35
3025.....	8	8185.....	15	4700B (13		5240.....	28	5200AA (13		5440.....	31	5558.....	35
3026.....	8	1725.....	15	Items).....	27	5241.....	28	Items).....	30	5485.....	32	5560.....	35
3425 (2).....	9	1730.....	15	4760.....	27	5242.....	28	5253.....	30	5447.....	33	5564.....	35
3426 (2).....	9	3714.....	16	4761.....	27	5243.....	28	5254.....	30	5453.....	33	5563.....	35
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Items).....	11	3720.....	16	4780.....	27	5274.....	28	5348.....	31	5300B (9		5649.....	36
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Items).....	13	708.....	17	4990S (L	28	5276.....	28	5353.....	31	5400AA (16		202.....	39
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8161.....	15	4708L.....	26	5210S.....	28	4918.....	29	5425.....	31	5542.....	35	216.....	40
8162.....	15	4710L.....	26	5212S.....	28	4920.....	29	5429.....	31	5544.....	35	218.....	40
8180.....	15	4712L.....	26										

NO. 9902 AND NO. 9903 MASTER INDUSTRIAL SETS



9997

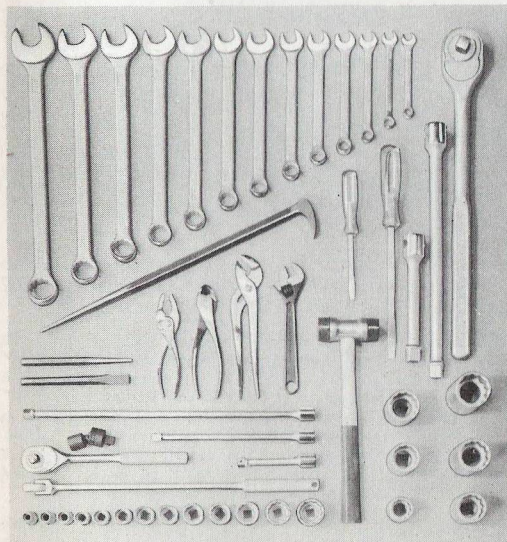
Set No. 9902 includes all of the 264 items in Set No. 9901, listed on Page 2, and Master Tool Chest No. 9997, described on Page 65. Weight, 186 Lbs.

Set No. 9903 includes all items in Set No. 9901, listed on Page 2, and a No. 9968A "Toolmobile" Mobile Cabinet, described on Page 64. Weight, 254 Lbs.



9968A

NO. 9904 DIESEL MAINTENANCE SET



For repair of diesel engines in locomotives, power plants, factories, trucks, etc. Includes 51 items. Weight, 42 Lbs.

Contents of No. 9904 Set: 13 combination box and open end wrenches; adjustable wrench; 19 sockets and attachments in $\frac{1}{2}$ " drive; 9 sockets and attachments in $\frac{3}{4}$ " drive; 3 pliers; 2 screwdrivers; bar; Nuplax hammer; punch, and chisel. The following table tells where every item is listed in this catalog:

NO.	PAGE	NO.	PAGE	NO.	PAGE
1214	12	5418	31	5542	35
1216	12	5420	31	5544	35
1218	12	5422	31	5546	35
1220	12	5424	31	5548	35
1222	12	5426	31	5552	35
1224	12	5428	31	5601	35
1226	12	5430	31	5603	35
1228	12	5432	31	5649	36
1230	12	5434	31	202	39
1232	12	5436	31	209	39
1234	12	5440	31	240	42
1236	12	5449	32	9804	44
1240	12	5468	32	9808	44
708S	17	5461	33	2130	55
7470	24	5463	33	1391	57
5414	31	5464	33	50 $\frac{1}{2}$	60
5416	31	5534	35	86A $\frac{1}{2}$	60



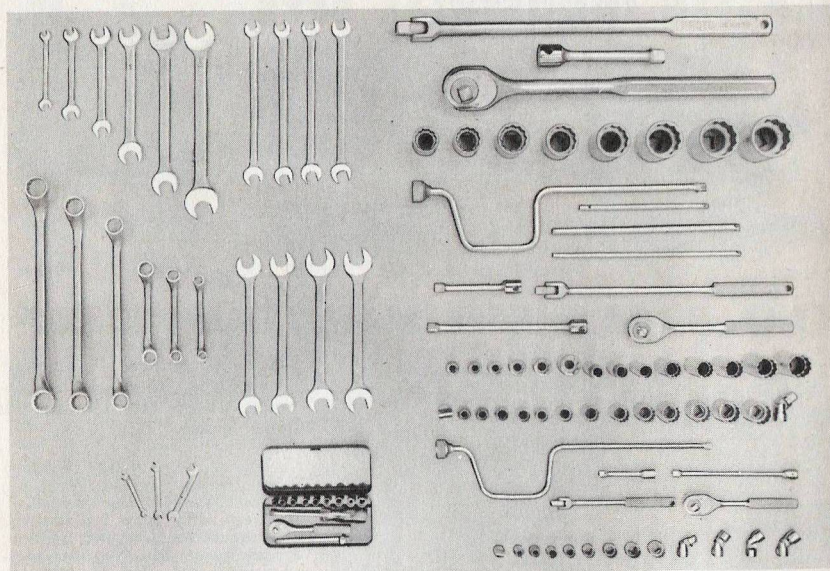
9972

NO. 9905 DIESEL MAINTENANCE SET

Set No. 9905 includes all 51 items in Set No. 9904, listed above, and Tool Box No. 9972, shown at the left and

described on Page 67. The box is handy for storing the tools and taking them to a job. Weight, 53 Lbs.

NO. 9906 MASTER WRENCH SET



A very complete set of end wrenches and socket wrenches with attachments that will handle a vast majority of all nut and

bolt turning jobs. Designed originally to meet military requirements. Includes 102 items. Weight, 50 Lbs.

Contents of No. 9906 Set: 6 open end wrenches with openings from $\frac{5}{16}$ " x $\frac{3}{8}$ " to $\frac{13}{16}$ " x 1"; 2 each of 4 tappet wrenches with openings from $\frac{1}{2}$ " x $\frac{9}{16}$ " to $\frac{13}{16}$ " x $\frac{7}{8}$ "; 3 midjet open end obstruction wrenches with openings from $\frac{1}{32}$ " x $\frac{1}{4}$ " to $\frac{11}{32}$ " x $\frac{3}{8}$ "; 3 short offset box wrenches with openings

from $\frac{3}{8}$ " x $\frac{1}{16}$ " to $\frac{5}{8}$ " x $\frac{11}{16}$ "; 3 long offset box wrenches with openings from $\frac{3}{4}$ " x $\frac{25}{32}$ " to $\frac{15}{16}$ " x 1"; $\frac{1}{4}$ " drive socket wrench set, including 9 sockets with openings from $\frac{1}{32}$ " to $\frac{1}{16}$ ", 3 handles and steel box; 11 sockets with openings from $\frac{3}{16}$ " to $\frac{3}{4}$ ", 1 screwdriver socket, 3 handles and 3

attachments in $\frac{3}{8}$ " drive; 27 sockets with openings from $\frac{3}{8}$ " to $1\frac{1}{8}$ ", 1 screwdriver socket, 5 handles and 3 attachments in $\frac{1}{2}$ " drive, and 8 sockets, 3 handles and 1 attachment in $\frac{3}{4}$ " drive. The following table tells where every item in the set is listed in this catalog:

NO.	PAGE	NO.	PAGE	NO.	PAGE	NO.	PAGE	NO.	PAGE
3020.....	8	8160.....	15	5220.....	28	5270.....	30	5416.....	31
3025.....	8	8161.....	15	5222.....	28	5340.....	31	5416S.....	31
3030.....	8	8162.....	15	5224.....	28	5341.....	31	5418.....	31
3035.....	8	8183.....	15	5244.....	28	5343.....	31	5418S.....	31
3040.....	8	8184.....	15	5275.....	28	5345.....	31	5419.....	31
3045.....	8	8185.....	15	5276.....	28	5347.....	31	5420.....	31
3426 (2).....	9	4700B (13		5277.....	28	5348.....	31	5420S.....	31
3430 (2).....	9	Items).....	27	5249.....	29	5351.....	31	5422.....	31
3435 (2).....	9	5210H.....	28	5265.....	29	5353.....	31	5424.....	31
3440 (2).....	9	5212.....	28	5280.....	29	5412S.....	31	5424S.....	31
3215.....	14	5214.....	28	5260.....	30	5414.....	31	5425.....	31
3220.....	14	5216.....	28	5261.....	30	5414S.....	31	5426.....	31
3225.....	14	5218.....	28						
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								5461.....	33
								5463.....	33
								5470.....	33
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								5661.....	35
								5649.....	36
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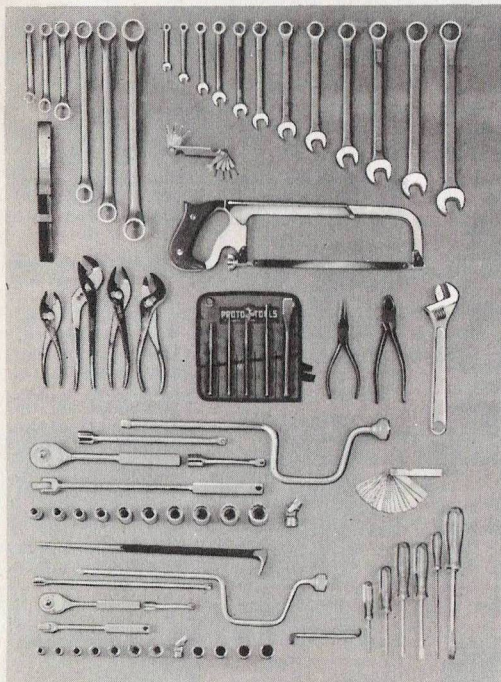
9997

NO. 9907 MASTER WRENCH SET

Set No. 9907 includes all of the 102 items in Set No. 9906, listed on Page 4, and Master Tool Chest No. 9997, shown at the left and described on

Page 65. This chest has two large drawers, four medium drawers, a three-compartment top section, and a removable tote tray. Weight, 115 Lbs.

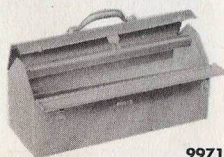
NO. 9908 MECHANICS STANDARD SET



A popular basic set with the most-needed tools for automotive and many other types of mechanics. Includes 76 highly useful items. Weight, 29 Lbs.

Contents of No. 9908 Set: 12 combination box and open end wrenches with openings from $\frac{1}{4}$ " to $\frac{15}{16}$ "; 3 short and 3 long offset box wrenches with openings from $\frac{3}{8}$ " x $\frac{1}{2}$ " to $\frac{15}{16}$ " x 1"; 10" adjustable wrench; 11 socket wrenches with openings from $\frac{3}{8}$ " to $\frac{15}{16}$ "; 3 handles and 3 attachments in $\frac{3}{8}$ " drive; 10 socket wrenches with openings from $\frac{1}{16}$ " to 1", 3 handles and 3 attachments in $\frac{1}{2}$ " drive; 6 pliers; 7 screwdrivers; carbon scraper; 2 gauge sets; hacksaw; rolling head bar, and set of 4 punches and 1 chisel in a kit. The following table tells where every item is listed in this catalog:

NO.	PAGE	NO.	PAGE	NO.	PAGE
1208	12	8184	15	276	43
1210	12	8185	15	278	43
1212	12	710	17	9604	44
1214	12	5020	28	9606	44
1216	12	5022	28	9622	44
1218	12	5024	28	9626	44
1220	12	5026	28	36 $\frac{1}{2}$	45
1222	12	5200AA (13		9682	45
1224	12	Items)	30	9684	45
1226	12	5400AA (16		2337	52
1228	12	Items)	34	000AA	54
1230	12	207	39	000K	54
8160	15	226	41	352	55
8161	15	239	42	2126	55
8162	15	240	42	3 (6	
8183	15			Items)	61



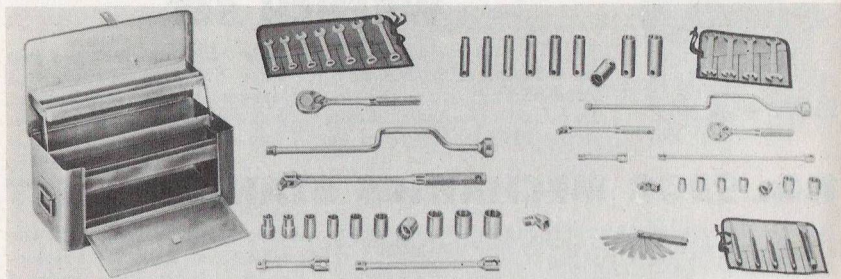
9971

NO. 9909 MECHANICS STANDARD SET

Set No. 9909 includes all of the 76 items in Set No. 9908, listed above, and Tool Box

No. 9971, shown at the left and described on Page 67. Weight, 38 Lbs.

NO. 9989C MASTER TOOL SET



An ideal set for industrial maintenance, providing needed tools for trouble-shooting and reducing time in breakdowns. Also a fine basic set for repair of cars, trucks, trac-

tors, refrigerators, etc. Gives very wide coverage for a low investment. Includes No. 9989 tool chest and the seven basic sets listed below. Weight, 39 Lbs.

No. 000A Short Feeler Gauge Set

NO.	DESCRIPTION
003	Gauge, .003" Thick
004	Gauge, .004" Thick
005	Gauge, .005" Thick
006	Gauge, .006" Thick
008	Gauge, .008" Thick
010	Gauge, .010" Thick
012	Gauge, .012" Thick
015	Gauge, .015" Thick
018	Gauge, .018" Thick
000C	Gauge Holder

No. 3 Punch and Chisel Set

41	3/4" Center Punch
47	7/16"x1/8" Rivet Punch
47	7/16"x3/16" Rivet Punch
50	1/16" Starting Punch
86A	1/2" Cold Chisel
2411	Vinyl Kit

No. 1200H Combination Wrench Set

1212	3/8" Openings
1214	7/16" Openings
1216	1/2" Openings
1218	9/16" Openings
1220	5/8" Openings
1222	11/16" Openings
1224	3/4" Openings
2404	Vinyl Kit

No. 3400G Tappet Wrench Set

3425	7/16"x1/2" Openings
3426	1/2"x9/16" Openings
3426	3/2"x9/16" Openings
3430	9/16"x5/8" Openings
2412	Vinyl Kit

No. 5200AA 3/8" Drive Socket Wrench Set

5212	Socket, 3/8" Op.
5214	Socket, 7/16" Op.

No. 5200AA Set—Contd.

NO.	DESCRIPTION
5216	Socket, 1/2" Op.
5218	Socket, 9/16" Op.
5220	Socket, 5/8" Op.
5222	Socket, 11/16" Op.
5224	Socket, 3/4" Op.
5249	Rev. Ratchet, 7"
5260	Extension, 31 1/2"
5262	Extension, 12"
5265	Hinge Handle, 7 3/8"
5270	Universal Joint
5280	Speed Handle, 16 7/8"

No. 5300B 1/2" Drive Deep Socket Set

5340	1/2" Opening
5341	9/16" Opening
5343	5/8" Opening
5344	11/16" Opening
5345	3/4" Opening
5347	13/16" Opening
5348	7/8" Opening

No. 5300B Set—Contd.

NO.	DESCRIPTION
5349	1 5/16" Opening
5351	1" Opening

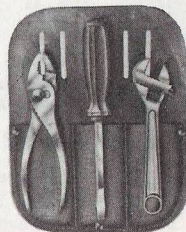
No. 5400AA 1/2" Drive Socket Wrench Set

5414	Socket, 7/16" Op.
5416	Socket, 1/2" Op.
5418	Socket, 9/16" Op.
5420	Socket, 5/8" Op.
5422	Socket, 11/16" Op.
5424	Socket, 3/4" Op.
5426	Socket, 13/16" Op.
5428	Socket, 7/8" Op.
5430	Socket, 1 5/16" Op.
5432	Socket, 1" Op.
5449	Rev. Ratchet, 10 1/4"
5461	Extension, 5"
5463	Extension, 10"
5467	Hinge Handle, 15"
5470	Universal Joint
5480	Speed Handle, 18"

No. 9900C Household Gift Set

Has handiest tools for most home and many professional jobs. In belt-type kit. Contents:

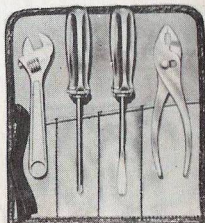
NO.	DESCRIPTION
276	6" Slip Jt. Plier
706S	6" Adjust. Wrench
9804	Screwdriver, Plastic Hdl., 1/4" Bit
2450	Leather Kit, 7"x9" Weight, 1.28 Lbs.



No. 9900D Car or Household Gift Set

Handy set to carry in car or keep in kitchen. Contents:

NO.	DESCRIPTION
276	6" Slip Jt. Plier
706	6" Adjust. Wrench
9604	Screwdriver, Plastic Hdl., 1/4" Bit
9684	Screwdriver, Phillips No. 2 Bit
2408	Kit, 8 1/2"x9 1/4" Weight, 1.24 Lbs.



METRIC-SIZE SOCKET WRENCHES



4704M-4712M

Metric-size sockets and open end wrenches are for cars, machinery, equipment, etc., made in France, Italy, Germany and most other European countries except England, which generally use Whitworth standards. The thin-wall sockets are made from fine alloy steel.



5412M-5432M

1/4" SQ. DR. SOCKETS — 6-PT.

NO.	OPENING SIZE, MM.	LENGTH, MM.	LENGTH, INCHES	WT. LBS.
4704M	4	22.2	7/8	.01
4705M	5	22.2	7/8	.02
4706M	6	22.2	7/8	.02
4707M	7	22.2	7/8	.02
4708M	8	22.2	7/8	.02
4709M	9	22.2	7/8	.03
4710M	10	22.2	7/8	.03
4711M	11	22.2	7/8	.04
4712M	12	22.2	7/8	.05

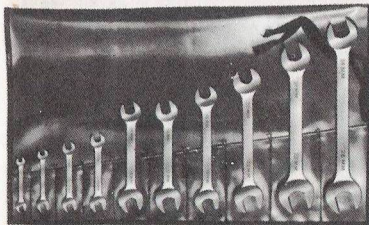
1/2" SQ. DR. SOCKETS — 12-PT.

NO.	OPENING SIZE, MM.	LENGTH, MM.	LENGTH, INCHES	WT. LBS.
5412M	12	35.7	1 1/2	.10
5413M	13	35.7	1 1/2	.11
5414M	14	35.7	1 1/2	.10
5415M	15	35.7	1 1/2	.11
5416M	16	35.7	1 1/2	.16
5417M	17	35.7	1 1/2	.13
5418M	18	35.7	1 1/2	.17
5419M	19	35.7	1 1/2	.16
5420M	20	35.7	1 1/2	.18
5421M	21	35.7	1 1/2	.21
5422M	22	38.9	1 1/2	.28
5423M	23	38.9	1 1/2	.32
5424M	24	38.9	1 1/2	.37
5425M	25	38.9	1 1/2	.30
5426M	26	38.9	1 1/2	.32
5427M	27	38.9	1 1/2	.31
5428M	28	45.2	1 3/4	.49
5429M	29	45.2	1 3/4	.46
5430M	30	45.2	1 3/4	.47
5432M	32	45.2	1 3/4	.49

METRIC-SIZE OPEN END WRENCHES

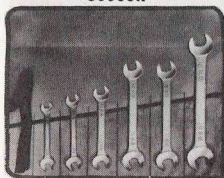
Forged from fine alloy steel and properly heat treated for extra strength and toughness. Openings are accurately milled. The ten wrenches provide all openings from 6 to 24 millimeters by

1-millimeter steps, plus a 26-millimeter opening. Two sets are available—one with all ten wrenches, and one with six wrenches.



30000A

30000R



NO.	NOM. OPEN. SIZES, MM.	HD. THICKNESS, MM.	LENGTH, MM.	LENGTH, INCHES	WT. LBS.
30607	6x7	5.2	88.9	3 1/2	.04
30809	8x9	6.0	101.6	4	.06
31011	10x11	6.3	114.3	4 1/2	.07
31213	12x13	6.7	127.0	5	.12
31415	14x15	8.3	165.1	6 1/2	.23
31617	16x17	8.3	165.1	6 1/2	.22
31819	18x19	9.1	203.2	8	.38
32022	20x22	9.9	241.3	9 1/2	.60
32123	21x23	9.9	254.0	10	.56
32426	24x26	10.7	285.8	11 1/4	.78

Set 30000R Contents

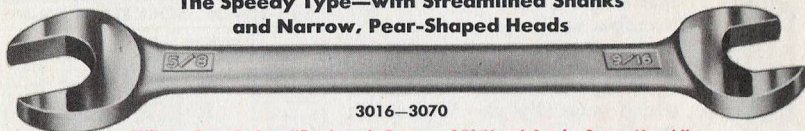
Set No. 30000A Contents

NO.	OPENING SIZES, MM.	LGTH., MM.	NO.	OPENING SIZES, MM.	LGTH., MM.
30607	6x7	88.9	31819	18x19	203.2
30809	8x9	101.6	32022	20x22	241.3
31011	10x11	114.3	32123	21x23	254.0
31213	12x13	127.0	32426	24x26	287.7
31415	14x15	165.1	2414 Vinyl Kit		
31617	16x17	165.1	Weight, 3.4 Lbs.		

NO.	OPENING SIZES, MM.	LGTH., MM.
30809	8x9	101.6
31011	10x11	114.3
31213	12x13	127.0
31415	14x15	165.1
31617	16x17	165.1
31819	18x19	203.2
2407 Vinyl Kit		
Weight, 1.20 Lbs.		

OPEN END WRENCHES—15° ANGLE

The Speedy Type—with Streamlined Shanks
and Narrow, Pear-Shaped Heads



3016—3070

Military Description: "Engineer's Pattern, 15° Head Angle, Spear Head."

Specs.: MIL-W-15751A, Type V, Style B; GGG-W-636, Style 1 or 2, Class B; or GGG-W-00636, Type IV.

Slim, scientifically tapered jaws reduce overall width of the pear-shaped heads to permit work in close places but are extra strong at points of greatest strain. Jaws have minimum overhang to speed seating on nut, increase strength and prevent jaw spreading. Opening bases have a radius determined for high strength. Heads have the correct thickness. Small radii where head and shank join increase useability in tight

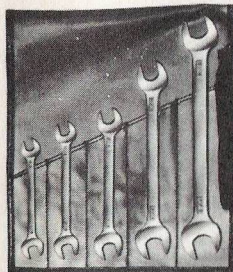
spots. Heads project from shank at 15° angle, permitting a turning arc of only 30°. Streamlined shanks are easy on hands, speed work and enhance appearance. Great strength and toughness—giving extra life—result from use of PROTOLOY® special alloy steels, scientific grain-flow forging, and correct heat treatment. Chrome plating gives rust-proof, lustrous-appearing wrenches.

® Registered U.S. Pat. Off.

NO.	NOMINAL OPENING SIZES	AMER. STD. HEAVY		AMER. STD. REG. BOLT HEADS		AMER. STD. REGULAR NUTS		AMER. STD. LIGHT (SAE)		HEAD THICK- NESS	OVER- ALL LENGTH	WT., LBS.
		SMALL	LARGE	SMALL	LARGE	SMALL	LARGE	SMALL	LARGE			
3016	3/16" x 1/4"	---	---	---	---	---	---	---	---	11/64"	4 1/8"	.02
3018	1/4" x 5/16"	---	---	---	---	---	---	---	---	11/64"	4 1/2"	.04
3020	5/16" x 3/8"	---	---	---	1/4	---	---	---	---	13/64"	4 7/8"	.05
3021	3/8" x 1/2"	---	---	1/4	---	1/4	---	1/4	---	1/32"	5 1/4"	.05
3025	1/2" x 1/2"	---	1/4 (N)	---	5/16	1/4	---	1/4	5/16	1/4"	5 5/8"	.10
3026	1/2" x 9/16"	1/4 (N)	---	5/16	3/8	---	5/16	5/16	3/8	17/64"	6"	.14
3027	1/2" x 19/32"	1/4 (N)	5/16 (N)	5/16	---	---	---	5/16	---	17/64"	6 3/8"	.15
3030	9/16" x 5/8"	---	---	3/8	1/2	5/16	3/8	3/8	1/2	19/64"	6 3/4"	.23
3031	5/8" x 3/4"	---	---	1/2	---	3/8	1/2	1/2	---	11/32"	7 3/8"	.27
3033	19/32" x 1 1/16"	5/16 (N)	3/8 (N)	---	---	---	---	---	---	21/64"	7 5/8"	.26
3034	5/8" x 1 1/16"	---	3/8 (N)	1/2	---	3/8	---	1/2	---	21/64"	8 1/8"	.28
3035	1 1/16" x 3/4"	3/8 (N)	---	1/2	---	1/2	---	1/2	---	11/32"	8 1/2"	.32
3036	1 1/16" x 7/8"	3/8 (N)	1/2	---	5/16	---	5/16	---	5/16	23/64"	9"	.42
3037	1 1/16" x 25/32"	3/8 (N)	1/2 (N)	---	---	---	---	---	---	11/32"	9 1/2"	.42
3039	3/4" x 7/8"	---	1/2	1/2	5/16	1/2	5/16	1/2	5/16	3/8"	10"	.45
3040	15/16" x 1"	---	1/2	---	5/16	1/2	5/16	---	5/16	3/8"	10 1/2"	.51
3041	7/8" x 1 1/16"	1/2	5/8	5/16	---	5/16	---	5/16	3/4	1/2"	11 1/8"	.70
3045	15/16" x 1"	5/16	---	5/8	---	5/8	---	5/8	---	1/2"	12"	.81
3047	15/16" x 1 1/16"	5/16	5/8	5/8	---	---	---	5/8	3/4	1/2"	13"	1.00
3050	1 1/16" x 1 1/8"	5/8	---	---	3/4	---	3/4	---	---	1/2"	13 3/8"	1.20
3051	1 1/16" x 1 1/4"	5/8	3/4	---	---	---	---	3/4	7/8	1/2"	14 7/8"	1.42
3055	1 1/4" x 1 5/16"	3/4	---	---	7/8	---	7/8	---	---	9/16"	16 1/4"	1.76
3060	1 3/8" x 1 1/16"	---	7/8	---	---	---	---	1	---	9/16"	17 3/4"	2.3
3061	1 1/4" x 1 1/16"	3/4	7/8	---	---	---	---	7/8	1	9/16"	17 3/4"	2.3
3065	1 1/16" x 1 5/8"	7/8	1	---	---	---	---	1	1 1/8	41/64"	19 1/2"	3.0
3070	1 1/2" x 1 5/8"	---	1	1	---	1	---	---	1 1/8	41/64"	19 1/2"	3.1

(N) Nuts Only.

OPEN END WRENCH SETS

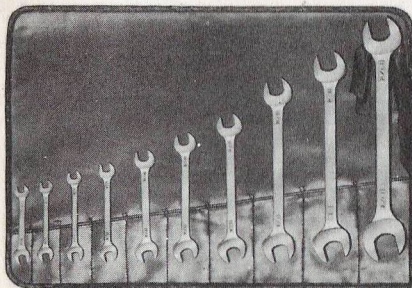


No. 3000N Set

This set is very popular because it includes five open end wrenches in the most-used range of sizes. All opening sizes are provided from $\frac{3}{8}$ " to $\frac{7}{8}$ " by $\frac{1}{16}$ " steps. It is a fine basic set to which more sizes can be added as they are needed.

Contents

NO.	OPENING SIZES	LENGTH
3021	$\frac{3}{8}$ " x $\frac{7}{16}$ "	5 $\frac{1}{4}$ "
3026	$\frac{1}{2}$ " x $\frac{9}{16}$ "	6"
3030	$\frac{9}{16}$ " x $\frac{5}{8}$ "	6 $\frac{3}{4}$ "
3035	$\frac{11}{16}$ " x $\frac{3}{4}$ "	8 $\frac{9}{16}$ "
3040	$\frac{13}{16}$ " x $\frac{7}{8}$ "	10 $\frac{1}{2}$ "
2409	Vinyl Kit, 9 $\frac{1}{2}$ " x 11 $\frac{3}{4}$ "	
Weight, 1.72 Lbs.		



No. 3000H Set

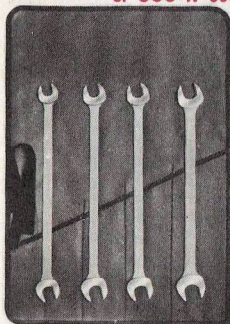
An expanded set of ten open end wrenches for professional use. All opening sizes are provided from $\frac{1}{4}$ " to $1\frac{1}{8}$ " by $\frac{1}{16}$ " steps.

Contents

NO.	OPENING SIZES	LENGTH
3018	$\frac{1}{4}$ " x $\frac{5}{16}$ "	4 $\frac{1}{2}$ "
3020	$\frac{5}{16}$ " x $\frac{3}{8}$ "	4 $\frac{7}{8}$ "
3025	$\frac{7}{16}$ " x $\frac{1}{2}$ "	5 $\frac{5}{8}$ "
3026	$\frac{1}{2}$ " x $\frac{9}{16}$ "	6"
3030	$\frac{9}{16}$ " x $\frac{5}{8}$ "	6 $\frac{3}{4}$ "
3031	$\frac{5}{8}$ " x $\frac{3}{4}$ "	7 $\frac{3}{16}$ "
3035	$\frac{11}{16}$ " x $\frac{3}{4}$ "	8 $\frac{9}{16}$ "
3040	$\frac{13}{16}$ " x $\frac{7}{8}$ "	10 $\frac{1}{2}$ "
3045	$\frac{15}{16}$ " x 1"	12"
3050	$1\frac{1}{16}$ " x $1\frac{1}{8}$ "	13 $\frac{7}{8}$ "
2406	Vinyl Kit, 21 $\frac{1}{4}$ " x 15 $\frac{1}{2}$ "	
Weight, 4.6 Lbs.		

TAPPET WRENCHES—15°-ANGLE HEADS

Military Specs.: MIL-W-15751A, Type XI; GGG-W-636, Type X; or GGG-W-00636, Type X, Class I.



3400G

Have best length for general use, 10", which provides good leverage, keeps hands away from hot manifolds, and still permits use in close quarters. Heads give good service without spreading. Wrench openings cover tappets, screws or lock nuts without excessive overhang, making them easier and faster to use. They are forged from fine alloy steel.

NO.	NOMINAL OPENING SIZES	HEAD THICKNESS		LGTH.	WT., LBS.
		SMALL	LARGE		
3425	$\frac{7}{16}$ " x $\frac{1}{2}$ "	.195"	.195"	10"	.15
3426	$\frac{1}{2}$ " x $\frac{9}{16}$ "	.160"	.183"	10"	.16
3430	$\frac{9}{16}$ " x $\frac{5}{8}$ "	.200"	.200"	10"	.24
3435	$\frac{11}{16}$ " x $\frac{3}{4}$ "	.210"	.210"	10"	.27
3440	$\frac{13}{16}$ " x $\frac{7}{8}$ "	.210"	.210"	10"	.35

No. 3400G Tappet Wrench Set

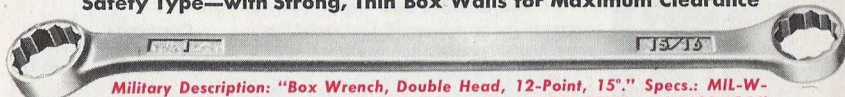
Contents

NO.	QUANTITY	OPENING SIZES
3425	1	$\frac{7}{16}$ " x $\frac{1}{2}$ "
3426	2	$\frac{1}{2}$ " x $\frac{9}{16}$ "
3430	1	$\frac{9}{16}$ " x $\frac{5}{8}$ "
2412	Vinyl Kit, $6\frac{3}{4}$ " x $11\frac{1}{2}$ "	
Weight, 1.02 Lbs.		

Note: For STANDARD Nut and Bolt Sizes, Corresponding to NOMINAL Wrench Openings, See Chart Opposite Page 68.

12-POINT BOX WRENCHES

Safety Type—with Strong, Thin Box Walls for Maximum Clearance



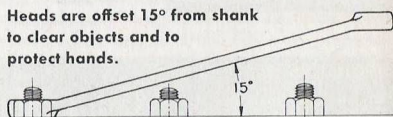
1120-
1164

Military Description: "Box Wrench, Double Head, 12-Point, 15°." Specs.: MIL-W-15751A; GGG-W-636, Type I and II, Style A (Nos. 1120L-1131L and 1133-1164) and Style B (Nos. 1120-1131); or GGG-W-00636, Type I, Class I, Styles A and B.

Thin but very strong box walls and resulting compact heads permit use in close quarters. Walls are thinner at the wrench tip than at the shank end of the box where greater strength is needed. Box openings are beveled for easy placement over a nut. Streamlined shanks provide comfortable grip, reduce the weight and allow long use without fatigue. These box wrenches are forged from special alloy steels and scientifically heat treated to give the desired

strength, toughness and hardness. Modern manufacturing produces uniform, high-quality wrenches with accurate openings, which speed work and reduce wear. Chrome plating gives a bright, rust-proof finish

Heads are offset 15° from shank to clear objects and to protect hands.



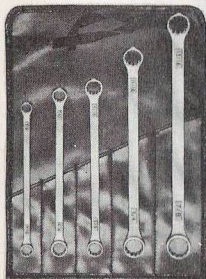
NO.	NOMINAL OPENING SIZES	AMER. STD. HEAVY		AMER. STD. REG. BOLT HEADS		AMER. STD. REGULAR NUTS		AMER. STD. LIGHT (SAE)		HEAD THICK-NESS	OVER-ALL LENGTH	WT. LBS.
		SMALL	LARGE	SMALL	LARGE	SMALL	LARGE	SMALL	LARGE			
1120	5/16" x 3/8"	---	---	---	1/4	---	---	---	---	9/32"	4 1/4"	.05
1122	3/8" x 1/2"	---	---	1/4	---	1/4	---	1/4	---	5/16"	4 5/8"	.06
1125	1/2" x 5/8"	---	1/4 (N)	---	5/16	---	5/16	1/4	5/16	5/16"	5"	.09
1126	1/2" x 9/16"	1/4 (N)	---	5/16	3/8	---	5/16	5/16	3/8	11/32"	5 3/8"	.11
1127	1/2" x 1 1/8"	1/4 (N)	5/16 (N)	5/16	---	---	5/16	5/16	3/8	11/32"	5 9/16"	.12
1130	9/16" x 5/8"	---	---	3/8	7/16	5/16	3/8	7/16	3/8	5/8"	5 3/4"	.14
1131	5/8" x 3/4"	---	---	7/16	1/2	3/8	7/16	7/16	1/2	13/32"	6 1/8"	.20
1133	19/32" x 1 1/8"	5/16 (N)	3/8 (N)	---	---	---	---	---	---	13/32"	10"	.30
1134	5/8" x 1 1/8"	---	3/8 (N)	7/16	---	3/8	---	7/16	---	13/32"	10 5/8"	.34
1135	1 1/16" x 3/4"	3/8 (N)	---	---	1/2	---	7/16	---	1/2	7/16"	11 1/4"	.43
1136	1 1/16" x 7/8"	3/8 (N)	1/2	9/16	---	9/16	---	9/16	---	7/16"	11 7/8"	.54
1137	1 1/16" x 25/32"	3/8 (N)	7/16 (N)	---	---	---	---	---	---	7/16"	12 1/2"	.43
1139	3/4" x 7/8"	---	1/2	1/2	9/16	7/16	9/16	1/2	9/16	13/32"	13 1/8"	.63
1140	13/16" x 7/8"	---	1/2	9/16	1/2	9/16	1/2	9/16	1/2	1/2"	13 7/8"	.65
1141	7/8" x 1 1/8"	1/2	5/8	9/16	---	9/16	---	9/16	3/4	1/2"	14 5/8"	.84
1145	15/16" x 1"	9/16	5/8	5/8	---	5/8	---	5/8	---	17/32"	15 1/2"	.93
1147	15/16" x 1 1/8"	9/16	5/8	5/8	---	---	---	---	3/4	9/16"	16 3/8"	1.08
1150	1 1/16" x 1 1/8"	5/8	---	---	3/4	3/4	---	3/4	---	9/16"	17 1/4"	1.17
1151	1 1/16" x 1 1/4"	5/8	3/4	---	---	3/4	---	3/4	7/8	9/16"	18 1/4"	1.38
1155	1 1/4" x 1 1/8"	3/4	---	7/8	---	7/8	---	7/8	---	5/8"	19 1/4"	1.54
1160	1 1/4" x 1 3/8"	3/4	---	---	---	---	---	---	---	5/8"	20 1/4"	1.82
1161	1 1/4" x 1 1/2"	3/4	7/8	---	---	---	---	1	---	11/16"	21 1/4"	2.0
1162	1 1/2" x 1 1/2"	7/8	---	1	---	1	---	1	---	3/4"	22 1/4"	2.3
1163	1 1/2" x 1 5/8"	7/8	1	---	---	---	---	1	1 1/8	13/16"	23 1/4"	2.8
1164	1 5/8" x 1 1/2"	1	---	1 1/8	---	1 1/8	---	1 1/8	---	7/8"	24 1/2"	3.1

LONG-TYPE (For Providing Additional Leverage on Hard Pulls)

1120L	5/16" x 3/8"	---	---	---	1/4	---	---	---	---	9/32"	7 3/4"	.09
1122L	3/8" x 1/2"	---	---	1/4	---	1/4	---	1/4	---	5/16"	7 5/8"	.11
1125L	1/2" x 5/8"	---	1/4 (N)	---	5/16	---	5/16	1/4	5/16	5/16"	7 7/8"	.14
1126L	1/2" x 9/16"	1/4 (N)	---	5/16	3/8	---	5/16	5/16	3/8	11/32"	8 3/8"	.18
1130L	9/16" x 5/8"	---	---	3/8	7/16	5/16	3/8	7/16	3/8	5/8"	8 7/8"	.24
1131L	5/8" x 3/4"	---	---	7/16	1/2	3/8	7/16	7/16	1/2	13/32"	9 7/16"	.37

(N) Nuts Only.

BOX WRENCH SETS

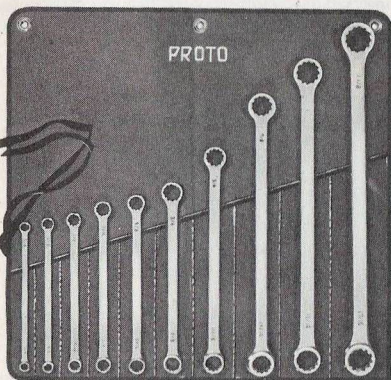


No. 1100K Set

A fine basic set of five double-end box wrenches in the most-used range to which you can add more sizes as they are needed. All opening sizes are provided from $\frac{3}{8}$ " to $\frac{7}{8}$ " by $\frac{1}{16}$ " steps.

Contents

NO.	OPENING SIZES	LENGTH
1122L	$\frac{3}{8}$ " x $\frac{7}{16}$ "	7 $\frac{5}{8}$ "
1126L	$\frac{1}{2}$ " x $\frac{9}{16}$ "	8 $\frac{3}{8}$ "
1130L	$\frac{5}{8}$ " x $\frac{5}{8}$ "	8 $\frac{7}{8}$ "
1135	$\frac{11}{16}$ " x $\frac{3}{4}$ "	11 $\frac{1}{4}$ "
1140	$\frac{13}{16}$ " x $\frac{7}{8}$ "	13 $\frac{7}{8}$ "
2405	Vinyl Kit, 10"x15"	
Weight, 2.2 Lbs.		



No. 1100M Set

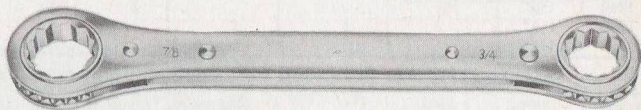
This master set of ten double-end box wrenches for professional use will take care of almost all common size nuts and bolts. It includes every nominal opening size from $\frac{5}{16}$ " to $1\frac{1}{8}$ " by $\frac{1}{16}$ " steps.

Contents

NO.	OPENING SIZES	LENGTH
1120L	$\frac{5}{16}'' \times \frac{3}{8}''$	$7\frac{3}{8}''$
1122L	$\frac{3}{8}'' \times \frac{7}{16}''$	$7\frac{5}{8}''$
1125L	$\frac{7}{16}'' \times \frac{1}{2}''$	$7\frac{7}{8}''$
1126L	$\frac{1}{2}'' \times \frac{9}{16}''$	$8\frac{3}{8}''$
1130L	$\frac{9}{16}'' \times \frac{5}{8}''$	$8\frac{7}{8}''$
1131L	$\frac{5}{8}'' \times \frac{3}{4}''$	$9\frac{7}{8}''$
1135	$\frac{11}{16}'' \times \frac{3}{4}''$	$11\frac{1}{4}''$
1140	$\frac{13}{16}'' \times \frac{7}{8}''$	$13\frac{7}{8}''$
1145	$\frac{15}{16}'' \times 1''$	$15\frac{1}{2}''$
1150	$1\frac{1}{16}'' \times 1\frac{1}{8}''$	$17\frac{1}{4}''$
2418	Vinyl Kit, $18\frac{7}{8}'' \times 18\frac{1}{2}''$	
Weight, 5.2 Lbs.		

RATCHETING BOX WRENCHES

Many applications. User can safely loosen or tighten a nut and then fast run the nut without lifting wrench or switching to another tool. Turning over wrench reverses direction. Laminated construction adds strength and reduces weight. Chrome plated.



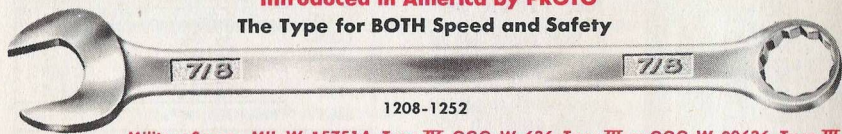
NO.	NOMINAL OPENING SIZES	AMER. STD. HEAVY		AM. STD. REG. BOLT HEADS		AMER. STD. REG. NUTS		AMER. STD. LIGHT (SAE)		HEAD THICKNESS	OVER-ALL LGTH.	WT., LBS.
		SMALL	LARGE	SMALL	LARGE	SMALL	LARGE	SMALL	LARGE			
†1191	$\frac{1}{4}$ " x $\frac{5}{16}$ "	----	----	$\frac{1}{4}$	----	----	----	$\frac{1}{4}$	----	$\frac{3}{8}$ "	4 $\frac{1}{4}$ "	.13
†1192	$\frac{3}{8}$ " x $\frac{1}{4}$ "	----	----	$\frac{1}{4}$	----	$\frac{1}{4}$	----	$\frac{1}{4}$	----	$\frac{3}{8}$ "	5 $\frac{1}{2}$ "	.18
†1193	$\frac{1}{2}$ " x $\frac{9}{16}$ "	$\frac{1}{4}$ (N)	----	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{5}{16}$	----	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{1}{2}$ "	6 $\frac{3}{4}$ "	.39
1194	$\frac{5}{8}$ " x $\frac{11}{16}$ "	----	$\frac{3}{8}$ (N)	$\frac{7}{16}$	----	$\frac{3}{8}$	----	$\frac{7}{16}$	----	$\frac{1}{2}$ "	8"	.60
1195	$\frac{3}{4}$ " x $\frac{7}{8}$ "	----	$\frac{1}{2}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{7}{16}$	$\frac{9}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{1}{2}$ "	9 $\frac{1}{4}$ "	.73

† 6-Point Box. (N) Nuts Only.

COMBINATION 12-POINT BOX AND OPEN END WRENCHES

Introduced in America by **PROTO**

The Type for BOTH Speed and Safety



1208-1252

Military Specs.: MIL-W-15751A, Type IV; GGG-W-636, Type III; or GGG-W-00636, Type III.

These very popular wrenches—with the same opening size on each end—have all the features of both open end and box wrenches, described on preceding pages. They are forged from special alloy steel.

Use the safe box end for breaking loose a nut, turn the wrench end for end, and then use the speedy open end for running off the nut. Just reverse the procedure for running on and cinching a nut.

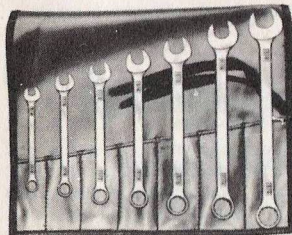
NO.	NOMINAL SIZE OF OPENINGS	AMER. STD. HEAVY	AMER. STD. REGULAR BOLT HEADS	AMER. STD. REGULAR NUTS	AMER. STD. LIGHT (SAE)	HEAD THICKNESS		OVER-ALL LENGTH	WT., LBS.
						BOX END	OPEN END		
†1208	1/4"	---	---	---	---	7/32"	3/16"	3"	.02
1210	5/16"	---	---	---	---	1/4"	13/64"	3 3/4"	.03
†1211	11/32"	---	---	---	---	1/4"	13/64"	4"	.06
1212	3/8"	---	1/4"	---	---	9/32"	13/64"	4 1/2"	.06
1214	7/16"	---	---	1/4"	---	5/16"	15/64"	5 1/4"	.10
1216	1/2"	1/4(N)	5/16"	---	5/16"	21/64"	17/64"	6"	.14
1218	9/16"	---	3/8"	3/8"	3/8"	11/32"	19/64"	6 3/4"	.20
1220	5/8"	---	7/16"	3/8"	7/16"	13/32"	21/64"	7 1/2"	.27
1222	11/16"	3/8(N)	---	---	---	7/16"	23/64"	8 1/4"	.34
1224	3/4"	---	1/2"	7/16"	1/2"	15/32"	25/64"	9 1/4"	.45
1226	13/16"	---	---	1/2"	---	1/2"	7/16"	10 1/4"	.55
1228	7/8"	1/2"	9/16"	9/16"	9/16"	1/2"	13/32"	11 1/4"	.65
1230	15/16"	9/16"	5/8"	---	5/8"	17/32"	1/2"	12 3/8"	.82
1232	1"	---	---	5/8"	---	17/32"	17/32"	13 3/8"	.94
1234	1 1/16"	5/8"	---	---	3/4"	9/16"	35/64"	14 3/8"	1.19
1236	1 1/8"	---	3/4"	3/4"	---	9/16"	9/16"	15 3/4"	1.36
1240	1 1/4"	3/4"	---	---	7/8"	5/8"	35/64"	17"	1.68
1242	1 5/16"	---	7/8"	7/8"	---	21/32"	37/64"	18 1/8"	1.94
1244	1 3/8"	---	---	---	---	11/16"	35/64"	19 3/8"	2.0
1246	1 7/16"	7/8"	---	---	1	3/4"	21/32"	20 5/8"	2.6
1248	1 1/2"	---	1	1	---	13/16"	11/16"	21 3/4"	3.0
1252	1 5/8"	1	---	---	1 1/8"	7/8"	23/32"	23"	3.2

LONG-TYPE (For Providing Additional Leverage on Hard Pulls)

†1208L	1/4"	---	---	---	---	7/32"	3/16"	4 7/8"	.04
1210L	5/16"	---	---	---	---	1/4"	13/64"	5 3/4"	.05
1212L	3/8"	---	1/4"	---	---	9/32"	13/64"	6 5/8"	.08
1214L	7/16"	---	---	1/4"	1/4"	5/16"	15/64"	7 1/2"	.13
1216L	1/2"	1/4(N)	5/16"	---	5/16"	21/64"	17/64"	8 1/4"	.17
1218L	9/16"	---	3/8"	3/8"	3/8"	11/32"	19/64"	9 1/8"	.25
1220L	5/8"	---	7/16"	3/8"	7/16"	13/32"	5/16"	10"	.33
1222L	11/16"	3/8(N)	---	---	---	7/16"	23/64"	10 7/8"	.38
1224L	3/4"	---	1/2"	7/16"	1/2"	15/32"	25/64"	11 3/4"	.51

†6-Point Box. (N) Nuts Only.

COMBINATION WRENCH SETS



No. 1200H Set

A very popular basic set of seven combination box and open end wrenches, including the most useful openings. Sizes range from $\frac{3}{8}$ " to $\frac{3}{4}$ " by $\frac{1}{16}$ " steps.

Contents

NO.	SIZE OF OPENINGS	LENGTH
1212	$\frac{3}{8}$ "	4 $\frac{1}{2}$ "
1214	$\frac{7}{16}$ "	5 $\frac{1}{4}$ "
1216	$\frac{1}{2}$ "	6"
1218	$\frac{9}{16}$ "	6 $\frac{3}{4}$ "
1220	$\frac{5}{8}$ "	7 $\frac{1}{2}$ "
1222	$\frac{11}{16}$ "	8 $\frac{1}{4}$ "
1224	$\frac{3}{4}$ "	9 $\frac{1}{4}$ "
2404 Vinyl Kit, 11 $\frac{3}{8}$ "x10 $\frac{1}{2}$ "		
Weight, 1.84 Lbs.		

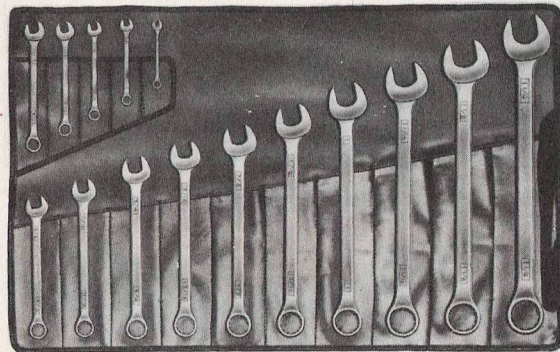
No. 1200F Set

A master set of fifteen combination box and open end wrenches that will handle close to

100% of all jobs in most types of industry. Includes opening sizes from $\frac{5}{16}$ " to $1\frac{1}{4}$ ".

Contents

NO.	SIZE OF OPENINGS	LENGTH
1210	$\frac{5}{16}$ "	3 $\frac{3}{4}$ "
1212	$\frac{3}{8}$ "	4 $\frac{1}{2}$ "
1214	$\frac{7}{16}$ "	5 $\frac{1}{4}$ "
1216	$\frac{1}{2}$ "	6"
1218	$\frac{9}{16}$ "	6 $\frac{3}{4}$ "
1220	$\frac{5}{8}$ "	7 $\frac{1}{2}$ "
1222	$\frac{11}{16}$ "	8 $\frac{1}{4}$ "
1224	$\frac{3}{4}$ "	9 $\frac{1}{4}$ "
1226	$\frac{13}{16}$ "	10 $\frac{1}{4}$ "
1228	$\frac{7}{8}$ "	11 $\frac{1}{4}$ "
1230	$\frac{15}{16}$ "	12 $\frac{3}{8}$ "
1232	1"	13 $\frac{3}{8}$ "
1234	1 $\frac{1}{16}$ "	14 $\frac{3}{8}$ "
1236	1 $\frac{1}{8}$ "	15 $\frac{3}{4}$ "
1240	1 $\frac{1}{4}$ "	17"
2413 Vinyl Kit, 25"x18 $\frac{1}{2}$ "		
Weight, 10 Lbs.		

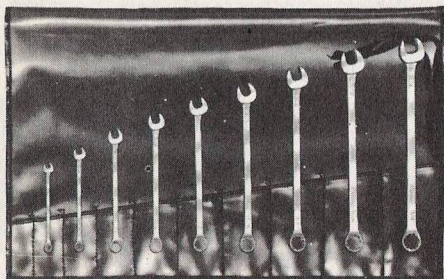


No. 1200L Set

A very useful set of the long-type, extra-leverage wrenches. Includes all nine available sizes, from $\frac{1}{4}$ " to $\frac{3}{4}$ ".

Contents

NO.	SIZE OF OPENINGS	LENGTH
1208L	$\frac{1}{4}$ "	4 $\frac{7}{8}$ "
1210L	$\frac{5}{16}$ "	5 $\frac{3}{8}$ "
1212L	$\frac{3}{8}$ "	6 $\frac{5}{8}$ "
1214L	$\frac{7}{16}$ "	7 $\frac{1}{2}$ "
1216L	$\frac{1}{2}$ "	8 $\frac{1}{4}$ "
1218L	$\frac{9}{16}$ "	9 $\frac{1}{8}$ "
1220L	$\frac{5}{8}$ "	10"
1222L	$\frac{11}{16}$ "	10 $\frac{7}{8}$ "
1224L	$\frac{3}{4}$ "	11 $\frac{3}{4}$ "
2415 Vinyl Kit, 12 $\frac{3}{4}$ "x13 $\frac{1}{8}$ "		
Weight, 2.4 Lbs.		



MIDGET OPEN END WRENCHES

Midget Open End Obstruction Wrenches—15° and 60°-Angle Heads

Military Specs.: MIL-W-15751A, Type VII, Style A; GGG-W-636, Type VI; or GGG-W-00636, Type VI, Style A.



3210—3226

The two openings on each wrench are duplicated on another wrench but at different head angles. Each pair, therefore, provides two opening sizes in both 15° and 60° angles. They are used on carburetors, timers, generators, radios and other electrical equipment. Forged from alloy steel.

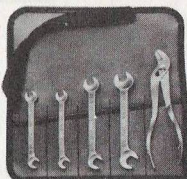
NO.	NOMINAL OPENING SIZES		HEAD THICKNESS	LENGTH	WT., LBS.
	15° END	60° END			
3210	1 $\frac{1}{64}$ "	1 $\frac{1}{64}$ "	$\frac{1}{64}$ "	3"	.02
3211	1 $\frac{1}{64}$ "	1 $\frac{1}{64}$ "	$\frac{1}{64}$ "	3"	.02
3215	1 $\frac{1}{32}$ "	1 $\frac{1}{32}$ "	$\frac{1}{64}$ "	3"	.02
3216	1 $\frac{1}{32}$ "	1 $\frac{1}{32}$ "	$\frac{1}{64}$ "	3"	.02
3220	1 $\frac{1}{16}$ "	1 $\frac{1}{16}$ "	$\frac{1}{32}$ "	3 $\frac{1}{2}$ "	.03
3221	1 $\frac{1}{16}$ "	1 $\frac{1}{16}$ "	$\frac{1}{32}$ "	3 $\frac{1}{2}$ "	.03
3225	1 $\frac{1}{8}$ "	1 $\frac{1}{8}$ "	$\frac{1}{16}$ "	3 $\frac{3}{4}$ "	.04
3226	1 $\frac{1}{8}$ "	1 $\frac{1}{8}$ "	$\frac{1}{16}$ "	3 $\frac{3}{4}$ "	.04

No. 3200B Set

A handy set of four obstruction-type wrenches with eight opening sizes, plus a midget plier.

Contents

NO.	OPEN. SIZES	LGTH.
3210	1 $\frac{1}{64}$ " x 1 $\frac{1}{64}$ "	3"
3215	1 $\frac{1}{32}$ " x 1 $\frac{1}{32}$ "	3"
3220	1 $\frac{1}{16}$ " x 1 $\frac{1}{16}$ "	3 $\frac{1}{2}$ "
3225	1 $\frac{1}{8}$ " x 1 $\frac{1}{8}$ "	3 $\frac{3}{4}$ "
235	Midget Plier	
2417	Vinyl Kit	
Weight, .28 Lb.		

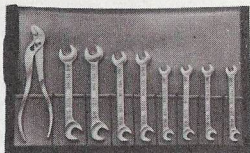


No. 3200D Set

A master set of all eight midget obstruction-type open end wrenches and a midget ignition plier.

Contents

NO.	OPEN. SIZES	LGTH.
3210	1 $\frac{1}{64}$ " x 1 $\frac{1}{64}$ "	3"
3211	1 $\frac{1}{64}$ " x 1 $\frac{1}{64}$ "	3"
3215	1 $\frac{1}{32}$ " x 1 $\frac{1}{32}$ "	3"
3216	1 $\frac{1}{32}$ " x 1 $\frac{1}{32}$ "	3"
3220	1 $\frac{1}{16}$ " x 1 $\frac{1}{16}$ "	3 $\frac{1}{2}$ "
3221	1 $\frac{1}{16}$ " x 1 $\frac{1}{16}$ "	3 $\frac{1}{2}$ "
3225	1 $\frac{1}{8}$ " x 1 $\frac{1}{8}$ "	3 $\frac{3}{4}$ "
3226	1 $\frac{1}{8}$ " x 1 $\frac{1}{8}$ "	3 $\frac{3}{4}$ "
235	Midget Plier	
2416	Vinyl Kit	
Weight, .40 Lb.		



Midget Open End Electrical Wrenches—15° and 80°-Angle Heads

Military Specs.: MIL-W-15751A, Type VII, Style B; or GGG-W-00636, Type VI, Style B.



3314—3340

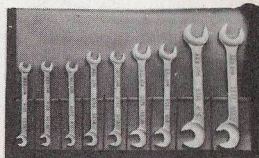
Both openings on each wrench are the same size. The 15° and 80°-angle heads are needed for delicate adjustments on timers, generators, radios, etc. Nos. 3336 and 3340 are for tractor and industrial use. All sizes have narrow shanks and small fillet radii. Forged from alloy steel.

NO.	NOMINAL OPENING SIZE BOTH ENDS	HEAD THICKNESS	LENGTH	WT., LBS.
3314	1 $\frac{1}{64}$ "	$\frac{1}{64}$ "	3 $\frac{1}{4}$ "	.02
3315	1 $\frac{1}{64}$ "	$\frac{1}{64}$ "	3 $\frac{1}{4}$ "	.02
3316	1 $\frac{1}{64}$ "	$\frac{1}{64}$ "	3 $\frac{1}{4}$ "	.02
3318	1 $\frac{1}{32}$ "	$\frac{1}{32}$ "	3 $\frac{5}{8}$ "	.03
3320	1 $\frac{1}{16}$ "	$\frac{1}{16}$ "	3 $\frac{5}{8}$ "	.03
3322	1 $\frac{1}{8}$ "	$\frac{1}{8}$ "	4"	.04
3324	1 $\frac{1}{8}$ "	$\frac{1}{8}$ "	4"	.04
3328	1 $\frac{1}{4}$ "	$\frac{1}{4}$ "	4 $\frac{3}{4}$ "	.07
3332	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	4 $\frac{3}{4}$ "	.07
3336	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	5 $\frac{3}{4}$ "	.14
3340	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	5 $\frac{3}{4}$ "	.12

No. 3300A Set

A highly useful set of nine electrical-type midget open end wrenches with nine opening sizes. Contents at right.

NO.	OPEN. SIZES	LGTH.	NO.	OPEN. SIZES	LGTH.
3314	$\frac{7}{32}$ "	$3\frac{1}{4}$ "	3322	$1\frac{1}{32}$ "	4"
3315	$1\frac{5}{64}$ "	$3\frac{1}{4}$ "	3324	$\frac{3}{8}$ "	4"
3316	$\frac{1}{4}$ "	$3\frac{1}{4}$ "	3328	$\frac{7}{16}$ "	$4\frac{3}{4}$ "
3318	$\frac{9}{32}$ "	$3\frac{5}{8}$ "	3332	$1\frac{1}{2}$ "	$4\frac{3}{4}$ "
3320	$\frac{5}{16}$ "	$3\frac{5}{8}$ "	2410	Vinyl Kit	
Weight, .42 Lb.					



Note: For STANDARD Nut and Bolt Sizes, Corresponding to NOMINAL Wrench Openings, See Chart Opposite Page 68.

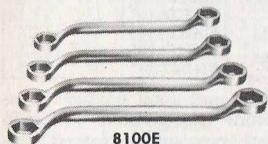
OFFSET BOX WRENCHES

Military Description: "Box Wrench, Double Head, 12-Point, Double Offset." Specs.: MIL-W-15751A, Type II, Style A (Nos. 8180-8185) and Style B (Nos. 8160-8163); or GGG-W-00636, Types I and II, Style A (Nos. 8180-8185) and Style B (Nos. 8112-8127).



Reach into counterbored places, casting depressions and other restricted spots where usual wrenches cannot be used. Heads are offset 45°, providing needed height for many jobs. Thin box walls allow maximum clearance. Forged from special alloy steel.

No. 8100E Midget Offset Box Wrench Set



In
card-
board
box.

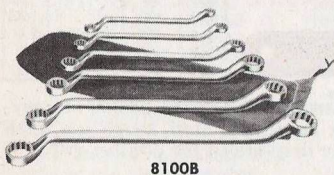
Contents

NO.	OPENINGS
8112	$\frac{3}{16}$ " x $\frac{13}{64}$ "
8117	$\frac{7}{32}$ " x $\frac{15}{64}$ "
8122	$\frac{1}{4}$ " x $\frac{9}{32}$ "
8127	$\frac{5}{16}$ " x $\frac{11}{32}$ "

Weight, .12 Lb.

No. 8100B Long Offset Box Wrench Set

Covers all popular opening sizes from $\frac{3}{8}$ " to 1". A real time and work saver. Supplied in a free cloth bag.



Contents

NO.	OPENINGS
8180	$\frac{3}{8}$ " x $\frac{1}{16}$ "
8181	$\frac{1}{2}$ " x $\frac{9}{16}$ "
8182	$\frac{5}{8}$ " x $\frac{1}{16}$ "
8183	$\frac{3}{4}$ " x $\frac{25}{32}$ "
8184	$\frac{15}{16}$ " x $\frac{1}{8}$ "
8185	$\frac{1}{2}$ " x 1"

Weight, 3.3 Lbs.

MIDGET TYPE-6-POINT

NO.	NOMINAL OPENING SIZES	HEAD THICK-NESS	LENGTH	WT., LBS.
8112	$\frac{3}{16}$ " x $\frac{13}{64}$ "	$\frac{9}{64}$ "	$2\frac{7}{8}$ "	.01
8117	$\frac{7}{32}$ " x $\frac{15}{64}$ "	$\frac{5}{32}$ "	$3\frac{1}{8}$ "	.02
8122	$\frac{1}{4}$ " x $\frac{9}{32}$ "	$\frac{11}{64}$ "	$3\frac{7}{16}$ "	.03
8127	$\frac{5}{16}$ " x $\frac{11}{32}$ "	$\frac{3}{16}$ "	$3\frac{7}{8}$ "	.04

SHORT TYPE-6-POINT

8160H	$\frac{3}{8}$ " x $\frac{1}{16}$ "	$\frac{5}{16}$ "	5"	.08
8161H	$\frac{1}{2}$ " x $\frac{9}{16}$ "	$\frac{11}{32}$ "	$5\frac{1}{2}$ "	.12

SHORT TYPE-12-POINT

8160	$\frac{3}{8}$ " x $\frac{1}{16}$ "	$\frac{5}{16}$ "	5"	.08
8161	$\frac{1}{2}$ " x $\frac{9}{16}$ "	$\frac{11}{32}$ "	$5\frac{1}{2}$ "	.12
8162	$\frac{5}{8}$ " x $\frac{1}{16}$ "	$\frac{13}{32}$ "	6"	.19
8163	$\frac{3}{4}$ " x $\frac{13}{16}$ "	$\frac{15}{32}$ "	$6\frac{1}{2}$ "	.25

LONG TYPE-6-POINT

8180H	$\frac{3}{8}$ " x $\frac{1}{16}$ "	$\frac{5}{16}$ "	$7\frac{3}{4}$ "	.16
8181H	$\frac{1}{2}$ " x $\frac{9}{16}$ "	$\frac{11}{32}$ "	9"	.25

LONG TYPE-12-POINT

8180	$\frac{3}{8}$ " x $\frac{1}{16}$ "	$\frac{5}{16}$ "	$7\frac{3}{4}$ "	.16
8181	$\frac{1}{2}$ " x $\frac{9}{16}$ "	$\frac{11}{32}$ "	9"	.25
8182	$\frac{5}{8}$ " x $\frac{1}{16}$ "	$\frac{13}{32}$ "	$10\frac{1}{4}$ "	.38
8183	$\frac{3}{4}$ " x $\frac{25}{32}$ "	$\frac{15}{32}$ "	$11\frac{1}{2}$ "	.46
8184	$\frac{13}{16}$ " x $\frac{1}{8}$ "	$\frac{17}{32}$ "	$12\frac{3}{4}$ "	.66
8185	$\frac{1}{2}$ " x 1"	$\frac{19}{32}$ "	14"	.93

OBSTRUCTION 12-PT. BOX WRENCHES

For turning nuts where obstructions prevent easy access with straight wrenches, and

particularly useful on many starters. Clearance at middle is 1". Made of alloy steel.



Military Specs.: MIL-W-15751A, Type III; or GGG-W-00636, Type II.

1725-1731

NO.	NOMINAL OPENING SIZES	HEAD THICK-NESS	LENGTH	WT., LBS.
1725	$\frac{7}{16}$ " x $\frac{1}{2}$ "	$\frac{25}{64}$ "	$5\frac{11}{16}$ "	.12
1730	$\frac{9}{16}$ " x $\frac{5}{8}$ "	$\frac{3}{8}$ "	$6\frac{21}{32}$ "	.20
1731	$\frac{5}{8}$ " x $\frac{3}{4}$ "	$\frac{13}{32}$ "	$7\frac{5}{8}$ "	.33

NO.	OPENING	HEAD SLOT	HEAD THKNS.	LGTH.	WT. LBS.
3712	3/8"	9/32"	5/16"	6 1/4"	.23
3714	7/16"	11/32"	11/32"	6 3/4"	.22
3716	1/2"	3/8"	7/16"	6 1/2"	.24
3718	9/16"	7/16"	7/16"	6 5/8"	.23
3720	5/8"	1/2"	15/32"	6 3/4"	.32
3724	3/4"	5/8"	9/16"	7"	.38
3728	7/8"	11/16"	5/8"	7 1/4"	.48
3730	15/16"	3/4"	5/8"	7 3/8"	.46
3732	1"	3/4"	11/16"	7 1/2"	.58
3734	1 1/16"	13/16"	3/4"	7 5/8"	.56
3736	1 1/8"	7/8"	25/32"	7 3/4"	.66

FLARE NUT WRENCHES

Military Specs.: MIL-W-15751A, Type XVI;
or GGG-W-00636, Type XIV.



Meet rigid requirements of U. S. Navy and Army Air Forces. For assembly and repair of fluid and gas lines on hydraulic units, air brake systems, compressors, instruments, etc. Save chewing of soft metal fittings. Forged from fine alloy steel.

PIPE WRENCHES

Heavy-Duty
Type

Military Specs.: GGG-W-00651,
Type II, Class B.



Spare Parts for Heavy-Duty Pipe Wrenches

DESCRIPTION	FOR 806HD	FOR 808HD	FOR 810HD	FOR 814HD	FOR 818HD	FOR 824HD
Handle, Heel Jaw & Pin Assembly	806A	808A	810A	814A	818A	824A
Hook Jaw	806B	808B	810B	814B	818B	824B
Heel Jaw & Pin	806C	808C	810C	814C	818C	824C
Knurl	806D	808D	810D	814D	818D	824D
Spring	806E	808E	810E	814E	818E	824E

Rugged design, engineered for light weight and good balance. Features include heat-treated, precision milled teeth, pipe sizes on forged hook jaw, I-beam handle of alloy ductile iron, and alloy steel jaws.

NO.	LGTH.	MAXIMUM PIPE SIZE	WT. LBS.
806HD	6"	3/4"	.45
808HD	8"	1"	.85
810HD	10"	1 1/2"	1.80
814HD	14"	2"	3.5
818HD	18"	2 1/2"	5.8
824HD	24"	3"	9.6

Normal-Duty Stillson-Pattern

Military Specs.: GGG-W-651, Type I (Normal Duty); or GGG-W-00651, Type I, Class A.



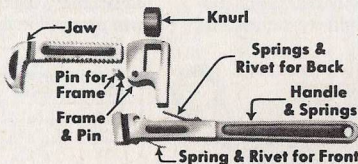
Strength far exceeds Government normal-duty specifications. Have forged and heat-treated special steel handle of panel I-beam

type, strengthened strain points, an easy-turning knurl, and hard, tough jaw teeth that are deep-milled for positive grip.

Spare Parts for Normal-Duty, Stillson-Pattern Pipe Wrenches

NO.	FOR	NO.	FOR	NO.	FOR	NO.	FOR	NO.	FOR	NO.	FOR	NO.	FOR
Handle & Spring	808J	808		Pin for Frame		810P	810	818P	818	Frame & Pin	814SB	814	
806H	806	810J	810	806P	806	808P	808	814P	814	824P	824	818SB	818
806H	806	814J	814								806PF	806	824SB
808H	808	818J	818								808PF	808	Spring & Rivet for Front
Handle & Springs	824J	824	Knurl								810PF	810	Rivet for Front
810H	810	806K	806								814PF	814	806SF
814H	814	808K	808								818PF	818	808SF
818H	818	810K	810								824PF	824	810SF
824H	824	814K	814								Spring & Rivet for Back	814SF	814
		818K	818								818SF	818	818SF
		824K	824								810SB	810	824SF
806J	806										824SF	824	

The diagram shows an exploded view of a mechanical assembly. The components are labeled as follows:
- **Jaw**: A curved, serrated metal piece on the left.
- **Knurl**: A small cylindrical component with a knurled texture.
- **Pin for Frame**: A small pin located between the Jaw and the Frame & Pin.
- **Frame & Pin**: A complex metal frame with a central pin.
- **Spring & Rivet for Back**: A coiled spring and a rivet located behind the Frame & Pin.
- **Handle & Springs**: A long, thin handle with two coiled springs attached.
- **Spring & Rivet for Front**: A coiled spring and a rivet located in front of the Handle & Springs.



ADJUSTABLE WRENCHES - 22½° ANGLE



Military Description: "22½° Angle, Heavy-Duty Adjustable Open End Wrench." **Specs.:** MIL-W-15674A, Type I; or GGG-W-631a, Type I, Class A or B.

NO.	LENGTH	MAX. OPNG.	FINISH	WT., LBS.
704	4"	1½"	Full	.10
704S	4"	1½"	Semi	.10
706	6"	3¼"	Full	.23
706S	6"	3¼"	Semi	.22
708	8"	5½"	Full	.54
708S	8"	5½"	Semi	.54
710	10"	11½"	Full	.85
710S	10"	11½"	Semi	.85
712	12"	15½"	Full	1.56
712S	12"	15½"	Semi	1.56
716	16"	17½"	Semi	3.7
720S	20"	21½"	Semi	6.3

Forged from fine alloy steel, these wrenches are strong—though thin and light to permit faster work.

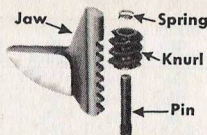
The five full-finish wrenches are highly polished and then chrome plated to prevent rust and enhance appearance. The seven semi-finish wrenches have polished heads.

Absence of a corner lip on the movable jaw (in most sizes) allows a square nut to fit flat against the inside jaw surface, resulting in greater strength, better adaptability to different size nuts, and elimination of "knuckle busting" due to slippage.

Two cost savers are the 16" size, which does the work of usual 15" and 18" wrenches, and the 20" size, which replaces usual 18" and 24" wrenches.

Adjustable Wrench Spare Parts

NO.	DESCRIPTION	NO.	DESCRIPTION	NO.	DESCRIPTION
704J	Jaw, 4", Polished	720J	Jaw, 20", Polished	712K	Knurl, 12", Polished
704JP	Jaw, 4", Plated	704K	Knurl, 4", Polished	712KP	Knurl, 12", Plated
706J	Jaw, 6", Polished	704KP	Knurl, 4", Plated	716K	Knurl, 16", Polished
706JP	Jaw, 6", Plated	706K	Knurl, 6", Polished	720K	Knurl, 20", Polished
708J	Jaw, 8", Polished	706KP	Knurl, 6", Plated	704N	Pin, 4", Polished
708JP	Jaw, 8", Plated	708K	Knurl, 8", Polished	706N	Pin, 6", Polished
710J	Jaw, 10", Polished	708KP	Knurl, 8", Plated	708N	Pin, 8", Polished
710JP	Jaw, 10", Plated	710K	Knurl, 10", Polished	710N	Pin, 10", Polished
712J	Jaw, 12", Polished	710KP	Knurl, 10", Plated	712N	Pin, 12", Polished
712JP	Jaw, 12", Plated			716N	Pin, 16", Polished
716J	Jaw, 16", Polished			720N	Pin, 20", Polished
				704R	Spring, 4"
				706R	Spring, 6"
				708R	Spring, 8"
				710R	Spring, 10"
				712R	Spring, 12"
				716R	Spring, 16"
				720R	Spring, 20"



NOTE: Polished jaws and knurls match semi-finish and full-polished wrenches. Pins and springs match all semi-finish, full-polished and plated wrenches.



No. 700A Adjustable Wrench Spare Parts Kit

NO.	QUAN.	NO.	QUAN.	Contents		NO.	QUAN.	NO.	QUAN.
704J	2	712J	1	NO.	QUAN.	716K	1	720N	1
704JP	2	712JP	1			720K	1	704R	3
706J	3	716J	1	708K	2	704N	3	706R	4
706JP	3	720J	1	708KP	2	706N	4	708R	4
708J	3	704K	1	710K	1	708N	5	710R	2
708JP	3	704KP	1	710KP	1	710N	2	712R	2
710J	1	706K	1	712K	1	712N	1	716R	2
710JP	1	706KP	1	712KP	1	716N	1	720R	2

Total of 72 Parts. Weight, 4.2 Lbs.

HEAVY-DUTY INDUSTRIAL WRENCHES

Striking Wrenches — 12-Point Box Type

Military Specs.: MIL-W-15751A, Type XIV; or GGG-W-00636, Type XII.



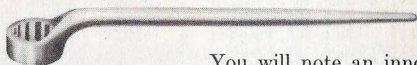
An Original Development by PROTO

NO.	NOMINAL OPENING SIZE	AMER. STD. HEAVY	AMER. STD. REGULAR	AM. STD. LIGHT (SAE)	OFFSET OF HEAD	HEAD THICK- NESS	OVER- ALL LENGTH	WT., LBS.
2617SW	1 $\frac{1}{16}$ "	$\frac{5}{8}$		$\frac{3}{4}$	1 $\frac{5}{16}$ "	$\frac{5}{8}$ "	8 $\frac{1}{2}$ "	1.7
2618SW	1 $\frac{1}{8}$ "		$\frac{3}{4}$		1 $\frac{5}{16}$ "	$\frac{5}{8}$ "	8 $\frac{1}{2}$ "	1.6
2620SW	1 $\frac{1}{4}$ "	$\frac{3}{4}$		$\frac{7}{8}$	1 $\frac{3}{8}$ "	$\frac{13}{16}$ "	10 $\frac{3}{4}$ "	3.2
2621SW	1 $\frac{1}{2}$ "		$\frac{7}{8}$		1 $\frac{3}{8}$ "	$\frac{13}{16}$ "	10 $\frac{3}{4}$ "	3.0
2623SW	1 $\frac{3}{8}$ "	$\frac{7}{8}$		1	1 $\frac{1}{2}$ "	1"	12"	4.7
2624SW	1 $\frac{1}{2}$ "		1		1 $\frac{1}{2}$ "	1"	12"	4.4
2626SW	1 $\frac{5}{8}$ "	1		1 $\frac{1}{8}$	1 $\frac{1}{2}$ "	1 $\frac{1}{8}$ "	12 $\frac{1}{4}$ "	4.6
2627SW	1 $\frac{11}{16}$ "		1 $\frac{1}{8}$		1 $\frac{1}{2}$ "	1 $\frac{1}{8}$ "	12 $\frac{1}{4}$ "	4.5
2629SW	1 $\frac{13}{16}$ "	1 $\frac{1}{8}$		1 $\frac{1}{4}$	1 $\frac{1}{2}$ "	1 $\frac{1}{8}$ "	13 $\frac{1}{16}$ "	6.6
2630SW	1 $\frac{7}{8}$ "		1 $\frac{1}{4}$		1 $\frac{1}{2}$ "	1 $\frac{1}{4}$ "	13 $\frac{1}{16}$ "	6.8
2632SW	2"	1 $\frac{1}{4}$		1 $\frac{3}{8}$	1 $\frac{1}{2}$ "	1 $\frac{1}{4}$ "	13 $\frac{1}{16}$ "	6.6
2635SW	2 $\frac{1}{8}$ "	1 $\frac{3}{8}$		1 $\frac{1}{2}$	2"	1 $\frac{1}{2}$ "	13 $\frac{1}{8}$ "	8.2
2638SW	2 $\frac{1}{4}$ "	1 $\frac{1}{2}$			2"	1 $\frac{1}{2}$ "	13 $\frac{7}{8}$ "	7.8
2641SW	2 $\frac{3}{8}$ "	1 $\frac{5}{8}$			2 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	13 $\frac{7}{8}$ "	8.7
2644SW	2 $\frac{1}{2}$ "	1 $\frac{3}{4}$			2 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	13 $\frac{7}{8}$ "	8.2
2647SW	2 $\frac{11}{16}$ "	1 $\frac{7}{8}$			2 $\frac{5}{8}$ "	1 $\frac{7}{8}$ "	16"	13
2650SW	3 $\frac{1}{8}$ "	2			2 $\frac{5}{8}$ "	1 $\frac{7}{8}$ "	16"	12

Striking wrenches have a square striking shank for use in restricted quarters with a sledge or hammer. They are offset to allow maximum clearance. These wrenches are necessary for tightening and loosening large bolts and nuts. Like all of the heavy-duty PROTO industrial wrenches, they are noted for their great strength, being forged from PROTO-specified alloy steels. Although strong enough for extra heavy duty, they are streamlined to reduce unnecessary weight. Protected by Parco-Lubrite finish.

Heavy-Duty Spud-End 12-Point Box Wrenches

Military Description: "Structural Wrench, Box, 12-Point, Single End, Offset Handle." Specs.: MIL-W-15751A, Type XB; or GGG-W-00636, Type IX, Class 2.



NO.	NOMINAL OPENING SIZE	AMER. STD. HEAVY	AMER. STD. REGULAR	AM. STD. LIGHT (SAE)	OFFSET OF HEAD	HEAD THICK- NESS	OVER- ALL LENGTH	WT., LBS.
2615	1 $\frac{1}{16}$ "	$\frac{9}{16}$	$\frac{5}{8}$ (B)	$\frac{5}{8}$	1 $\frac{3}{32}$ "	$\frac{5}{8}$ "	14 $\frac{1}{2}$ "	1.13
2617	1 $\frac{1}{8}$ "	$\frac{5}{8}$		$\frac{3}{4}$	1 $\frac{1}{8}$ "	1 $\frac{1}{16}$ "	15 $\frac{5}{8}$ "	1.30
2618	1 $\frac{1}{4}$ "		$\frac{3}{4}$		1 $\frac{1}{8}$ "	1 $\frac{1}{16}$ "	16 $\frac{3}{4}$ "	1.94
2620	1 $\frac{1}{2}$ "	$\frac{3}{4}$		$\frac{7}{8}$	1 $\frac{1}{8}$ "	1 $\frac{1}{16}$ "	17 $\frac{1}{2}$ "	2.2
2623	1 $\frac{3}{8}$ "	$\frac{7}{8}$		1	1 $\frac{1}{8}$ "	1 $\frac{1}{16}$ "	19"	3.0
2624	1 $\frac{1}{2}$ "		1		1 $\frac{1}{2}$ "	1"	20 $\frac{1}{8}$ "	3.3
2626	1 $\frac{5}{8}$ "	1		1 $\frac{1}{8}$	1 $\frac{1}{2}$ "	1 $\frac{1}{8}$ "	21 $\frac{1}{4}$ "	3.6
2627	1 $\frac{11}{16}$ "		1 $\frac{1}{8}$		1 $\frac{1}{2}$ "	1 $\frac{1}{8}$ "	22 $\frac{1}{4}$ "	3.7
2629	1 $\frac{13}{16}$ "	1 $\frac{1}{8}$		1 $\frac{1}{4}$	1 $\frac{1}{2}$ "	1 $\frac{1}{8}$ "	23 $\frac{1}{4}$ "	5.5
2630	1 $\frac{7}{8}$ "		1 $\frac{1}{4}$		1 $\frac{1}{2}$ "	1 $\frac{1}{4}$ "	24 $\frac{1}{4}$ "	5.6
2632	2"	1 $\frac{1}{4}$		1 $\frac{3}{8}$	1 $\frac{1}{2}$ "	1 $\frac{1}{4}$ "	25 $\frac{1}{4}$ "	6.0
2635	2 $\frac{1}{8}$ "	1 $\frac{3}{8}$		1 $\frac{1}{2}$	1 $\frac{1}{2}$ "	1 $\frac{3}{8}$ "	26"	6.4
2638	2 $\frac{1}{4}$ "	1 $\frac{1}{2}$			2"	1 $\frac{1}{2}$ "	27"	7.0
2641	2 $\frac{3}{8}$ "	1 $\frac{5}{8}$			2 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	28"	8.7
2644	2 $\frac{1}{2}$ "	1 $\frac{3}{4}$			2 $\frac{1}{4}$ "	1 $\frac{1}{2}$ "	29"	8.2
2647	2 $\frac{11}{16}$ "	1 $\frac{7}{8}$			2 $\frac{5}{8}$ "	1 $\frac{7}{8}$ "	29 $\frac{3}{4}$ "	12
2650	3 $\frac{1}{8}$ "	2			2 $\frac{5}{8}$ "	1 $\frac{7}{8}$ "	30"	11

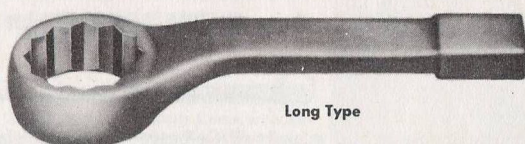
(B) Bolt Heads Only. (N) Nuts Only.

You will note an innovation in this wrench, as a real safety factor has been introduced. It is a combination box wrench with tapered spud handle, which makes quick work of loosening frozen or corroded bolts or nuts. The spud end is very handy for aligning holes in flanges. Note the clearance provided by the offset head which overcomes the usual clearance problems. These wrenches are ideal for construction, refineries, etc. Forged from alloy steel. Parco-Lubrite finish.

HEAVY-DUTY INDUSTRIAL WRENCHES



Short Type



Long Type

Slugging Wrenches — 12-Point Box Type

Military Specs.: MIL-W-15751 A, Type XIII, Style A (Short Type, Nos. USN221-274) and Style B (Long Type, Nos. USN326-374); or GGG-W-00636, Type XI, Style A (Short Type, Nos. USN221-274) and Style B (Long Type, Nos. USN326-374).

Industrial slugging box wrenches are designed for all types of heavy industrial work where the working space is extremely limited or highly congested. The 12-point opening fits snugly upon the bolt or nut and will remain in position while being struck with heavy hammer or sledge. These wrenches are a boon to shipbuilders (for installing or repairing machinery in ships), diesel power plants, railroad repair shops, oil refineries and other plants with heavy machinery. They are forged from PROTO-specified alloy steel and are protected from rust by Parco-Lubrite finish.

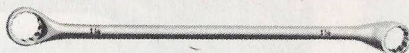
NO. SHORT TYPE	NO. LONG TYPE	NOMINAL OPENING SIZE	AM. STD. HEAVY	AM. STD. REGULAR	AM. STD. LIGHT (SAE)	HEAD THICKNESS	LENGTH SHORT TYPE	LENGTH LONG TYPE	WT., LBS. SHORT TYPE	WT., LBS. LONG TYPE
USN221	-----	1 $\frac{5}{16}$ "	-----	$\frac{7}{8}$	-----	$\frac{7}{8}$ "	6"	-----	1.84	-----
USN223	-----	1 $\frac{7}{16}$ "	$\frac{7}{8}$	-----	1	$\frac{7}{8}$ "	6"	-----	1.80	-----
USN224	-----	1 $\frac{1}{2}$ "	-----	1	-----	$\frac{7}{8}$ "	6"	-----	1.76	-----
USN226	USN326	1 $\frac{5}{8}$ "	1	-----	1 $\frac{1}{8}$	1 $\frac{1}{8}$ "	7"	10"	3.3	3.2
USN227	USN327	1 $\frac{11}{16}$ "	-----	1 $\frac{1}{8}$	-----	1 $\frac{1}{8}$ "	7"	10"	3.3	3.1
USN229	USN329	1 $\frac{3}{16}$ "	1 $\frac{1}{8}$	-----	1 $\frac{1}{4}$	1 $\frac{1}{8}$ "	7"	10"	3.2	3.0
USN230	USN330	1 $\frac{7}{8}$ "	-----	1 $\frac{1}{4}$	-----	1 $\frac{1}{4}$ "	7"	10 $\frac{3}{4}$ "	3.0	4.0
USN232	USN332	2"	1 $\frac{1}{4}$	-----	1 $\frac{3}{8}$	1 $\frac{1}{4}$ "	7 $\frac{1}{2}$ "	10 $\frac{3}{4}$ "	5.0	3.8
USN235	USN335	2 $\frac{3}{16}$ "	1 $\frac{3}{8}$	-----	1 $\frac{1}{2}$	1 $\frac{3}{8}$ "	7 $\frac{1}{2}$ "	11"	4.7	5.0
USN236	USN336	2 $\frac{1}{4}$ "	-----	1 $\frac{1}{2}$	-----	1 $\frac{3}{8}$ "	7 $\frac{1}{2}$ "	11"	4.7	4.9
USN238	USN338	2 $\frac{3}{8}$ "	1 $\frac{1}{2}$	-----	-----	1 $\frac{3}{8}$ "	8 $\frac{1}{16}$ "	14 $\frac{1}{2}$ "	8.0	8.6
USN241	USN341	2 $\frac{5}{16}$ "	1 $\frac{5}{8}$	-----	-----	1 $\frac{5}{8}$ "	8 $\frac{1}{16}$ "	14 $\frac{1}{2}$ "	7.6	8.3
USN242	USN342	2 $\frac{3}{8}$ "	-----	1 $\frac{3}{4}$	-----	1 $\frac{5}{8}$ "	8 $\frac{1}{16}$ "	14 $\frac{1}{2}$ "	7.7	8.0
USN244	USN344	2 $\frac{3}{4}$ "	1 $\frac{3}{4}$	-----	-----	1 $\frac{5}{8}$ "	9 $\frac{1}{2}$ "	14 $\frac{1}{2}$ "	12	7.7
USN247	-----	2 $\frac{5}{16}$ "	1 $\frac{7}{8}$	-----	-----	1 $\frac{7}{8}$ "	9 $\frac{1}{2}$ "	-----	12	-----
USN248	USN348	3"	-----	2	-----	1 $\frac{7}{8}$ "	9 $\frac{1}{2}$ "	15 $\frac{3}{4}$ "	11	12
USN250	USN350	3 $\frac{1}{8}$ "	2	-----	-----	1 $\frac{7}{8}$ "	9 $\frac{1}{2}$ "	15 $\frac{3}{4}$ "	11	11
USN254	USN354	3 $\frac{3}{8}$ "	-----	2 $\frac{1}{4}$	-----	2"	10"	17 $\frac{3}{8}$ "	14	16
USN256	USN356	3 $\frac{1}{2}$ "	2 $\frac{1}{4}$	-----	-----	2"	10"	17 $\frac{3}{8}$ "	14	15
USN260	-----	3 $\frac{3}{4}$ "	-----	2 $\frac{1}{2}$	-----	2 $\frac{1}{4}$ "	10 $\frac{3}{4}$ "	-----	20	-----
USN262	-----	3 $\frac{7}{8}$ "	2 $\frac{1}{2}$	-----	-----	2 $\frac{1}{4}$ "	10 $\frac{3}{4}$ "	-----	19	-----
USN266	USN366	4 $\frac{1}{8}$ "	-----	2 $\frac{3}{4}$	-----	2 $\frac{3}{8}$ "-2 $\frac{7}{8}$ "	11 $\frac{1}{8}$ "	16"	22	26
USN268	USN368	4 $\frac{1}{4}$ "	2 $\frac{3}{4}$	-----	-----	2 $\frac{3}{8}$ "-2 $\frac{7}{8}$ "	11 $\frac{1}{8}$ "	18"	22	25
USN272	USN372	4 $\frac{1}{2}$ "	-----	3	-----	2 $\frac{3}{4}$ "-3"	11 $\frac{5}{8}$ "	19 $\frac{3}{4}$ "	28	34
USN274	USN374	4 $\frac{5}{8}$ "	3	-----	-----	2 $\frac{3}{4}$ "-3"	11 $\frac{5}{8}$ "	19 $\frac{3}{4}$ "	27	33

Additional sizes, not listed above as standard, can be made on special order.

HEAVY-DUTY INDUSTRIAL WRENCHES

Heavy-Duty Double-End 12-Point Box Wrenches

Military Specs.: MIL-W-15751A, Type II, Class A.



Safety engineers and workers whole-heartedly endorse these wrenches. They are made stronger in the neck, or offset, but without increasing the thickness between the broached opening and the under side of the offset. The crescent-shaped neck is not only stronger but also will work in

closer places. High-pressure flanges and castings with ribs or bosses adjacent to bolt holes are examples of work where minimum rear wall thickness is valuable. They are forged from PROTO-specified alloy steel and have Parco-Lubrite finish to protect them from rust.

NO.	NOMINAL OPENING SIZES	AMER. STD. HEAVY		AMER. STD. REGULAR		AMER. STD. LIGHT (SAE)		HEAD THICKNESS		OVER-ALL LGTH.	WT. LBS.
		SMALL	LARGE	SMALL	LARGE	SMALL	LARGE	SMALL	LARGE		
1051	1 $\frac{1}{16}$ "x1 $\frac{1}{4}$ "	$\frac{5}{8}$	$\frac{3}{4}$	-----	-----	$\frac{3}{4}$	$\frac{7}{8}$	1 $\frac{1}{16}$ "	1 $\frac{3}{16}$ "	16 $\frac{1}{2}$ "	2.1
1053	1 $\frac{1}{8}$ "x1 $\frac{1}{16}$ "	-----	-----	$\frac{3}{4}$	$\frac{7}{8}$	-----	-----	$\frac{3}{4}$ "	$\frac{7}{8}$ "	18 $\frac{1}{8}$ "	2.4
1061	1 $\frac{1}{4}$ "x1 $\frac{1}{16}$ "	$\frac{3}{4}$	$\frac{7}{8}$	-----	-----	$\frac{7}{8}$	1	$\frac{7}{8}$ "	1 $\frac{5}{16}$ "	20"	3.9
1063	1 $\frac{1}{16}$ "x1 $\frac{5}{8}$ "	$\frac{7}{8}$	1	-----	-----	1	1 $\frac{1}{8}$	1"	1 $\frac{1}{8}$ "	22 $\frac{1}{2}$ "	4.6
1066	1 $\frac{3}{16}$ "x2"	1 $\frac{1}{8}$	1 $\frac{1}{4}$	-----	-----	1 $\frac{1}{4}$	1 $\frac{3}{8}$	1 $\frac{3}{16}$ "	1 $\frac{1}{4}$ "	25 $\frac{3}{4}$ "	7.4
1069	2 $\frac{3}{16}$ "x2 $\frac{3}{8}$ "	1 $\frac{3}{8}$	1 $\frac{1}{2}$	-----	-----	1 $\frac{1}{2}$	-----	1 $\frac{3}{8}$ "	1 $\frac{1}{2}$ "	27"	9.0

3/4" DR. IMPACT SOCKET WRENCHES

Military Specs.: GGG-W-00660, Type I, Style A (6-Point).

For illustration of 6-point socket, description, and details of pin and band, see next page.

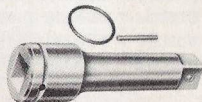
REGULAR SOCKETS — 6-POINT (SINGLE HEXAGON)									
NO.	NOMINAL OPENING SIZE	AMER. STD. HEAVY	AMER. STD. REGULAR BOLT HEADS	AMER. STD. REGULAR NUTS	AMER. STD. LIGHT (SAE)	DEPTH OF PUNCHED OPENING	MAXIMUM DIAMETER	OVERALL LENGTH	WT. LBS.
07512	$\frac{3}{4}$ "	-----	$\frac{1}{2}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{5}{8}$ "	1.625"	1 $\frac{7}{8}$ "	.68
07513	1 $\frac{1}{16}$ "	-----	$\frac{1}{2}$	$\frac{1}{2}$	-----	$\frac{5}{8}$ "	1.625"	1 $\frac{7}{8}$ "	.62
07514	$\frac{7}{8}$ "	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{9}{16}$	$\frac{9}{16}$	$\frac{5}{8}$ "	1.625"	2"	.70
07515	1 $\frac{5}{16}$ "	$\frac{9}{16}$ †	$\frac{5}{8}$	-----	$\frac{5}{8}$	$\frac{5}{8}$ "	1.750"	2"	.86
07516	1"	-----	-----	$\frac{5}{8}$	-----	$\frac{5}{8}$ "	1.875"	2 $\frac{1}{16}$ "	1.00
07517	1 $\frac{1}{16}$ "	$\frac{5}{8}$	-----	-----	$\frac{3}{4}$	$\frac{3}{4}$ "	1.875"	2 $\frac{1}{16}$ "	.96
07518	1 $\frac{1}{8}$ "	-----	$\frac{3}{4}$	$\frac{3}{4}$	-----	1 $\frac{1}{16}$ "	2.000"	2 $\frac{3}{16}$ "	1.28
07520	1 $\frac{1}{4}$ "	$\frac{3}{4}$	-----	-----	$\frac{7}{8}$	1 $\frac{1}{32}$ "	2.125"	2 $\frac{3}{16}$ "	1.36
07521	1 $\frac{5}{16}$ "	-----	$\frac{7}{8}$	$\frac{7}{8}$	-----	1 $\frac{1}{32}$ "	2.125"	2 $\frac{3}{16}$ "	1.32
07523	1 $\frac{7}{16}$ "	$\frac{7}{8}$	-----	-----	1	1 $\frac{1}{32}$ "	2.250"	2 $\frac{5}{16}$ "	1.56
EXTRA DEEP SOCKET — 6-POINT (SINGLE HEXAGON)									
07524L	1 $\frac{1}{2}$ "	-----	1	1	-----	$\frac{7}{8}$ "	2.313"	3 $\frac{1}{2}$ "	2.6
EXTRA DEEP SOCKET — 4-POINT (SINGLE SQUARE)									
07513SL	1 $\frac{1}{16}$ "	-----	-----	$\frac{1}{2}$	-----	1 $\frac{1}{32}$ "	1.750"	3 $\frac{1}{2}$ "	1.78

†Does Not Apply to USS Nuts.

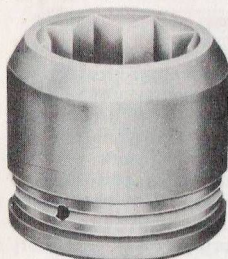
IMPACT SOCKET EXTENSIONS

Adapt sockets to obstruction use. Retaining pin and flat band for holding pin in position are included.

NO.	DRIVE SIZE	SHANK SIZE	LGTH.	WT. LBS.
07567	$\frac{3}{4}$ "	1"	7"	1.9
10607	1"	1 $\frac{11}{32}$ "	7 $\frac{1}{2}$ "	3.7



1" SQ. DRIVE IMPACT SOCKET WRENCHES



8-Point

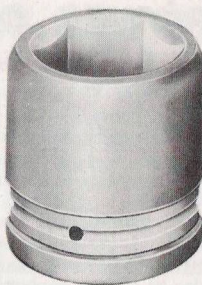
Military Specs.: GGG-W-00660, Type I, Class 1, Style A (6-Point).

These extra rugged sockets, made from finest alloy steel, are for Chicago Pneumatic, Ingersoll-Rand, Thor, and other impact wrenches.

Sockets Come with Retainer Pin & Flat Band.



If Neoprene "O" Ring Is Desired, Order Separately, Specifying Socket or Extension Number.



6-Point

REGULAR SOCKETS — 6-POINT (SINGLE HEXAGON)

NO.	NOMINAL OPENING SIZE	AMER. STD. HEAVY	AMER. STD. REGULAR BOLT HEADS	AMER. STD. REGULAR NUTS	AMER. STD. LIGHT (SAE)	DEPTH OF PUNCHED OPENING	MAXIMUM DIAMETER	OVERALL LENGTH	WT., LBS.
10012	3/4"	---	1/2	7/16	1/2	1 11/16"	2.000"	2 1/8"	.96
10014	7/8"	1/2	9/16	9/16	9/16	1 11/16"	2.000"	2 1/8"	1.04
10015	15/16"	9/16†	5/8	---	5/8	1 11/16"	2.000"	2 1/8"	1.02
10016	1"	---	---	5/8	---	1 11/16"	2.000"	2 1/8"	1.06
10017	1 1/16"	5/8	---	---	3/4	3 3/4"	2.125"	2 3/16"	1.28
10018	1 1/8"	---	3/4	3/4	---	3 3/4"	2.125"	2 3/16"	1.30
10019	1 1/8"	---	---	---	---	3 3/4"	2.125"	2 3/16"	1.28
10020	1 1/4"	3/4	---	---	7/8	3 3/4"	2.125"	2 3/16"	1.23
10021	1 5/16"	---	7/8	7/8	---	3 13/16"	2.125"	2 1/4"	1.30
10022	1 3/8"	---	---	---	---	3 13/16"	2.250"	2 1/4"	1.46
10023	1 7/16"	7/8	---	---	1	3 13/16"	2.250"	2 5/16"	1.46
10024	1 1/2"	---	1	1	---	3 13/16"	2.313"	2 7/16"	1.46
10025	1 5/8"	---	---	---	---	3 13/16"	2.375"	2 1/2"	1.56
10026	1 5/8"	1	---	---	1 1/8	3 15/16"	2.438"	2 5/8"	1.78
10027	1 11/16"	---	1 1/8	1 1/8	---	1 13/32"	2.563"	2 5/8"	1.96
10028	1 3/4"	---	---	---	---	1 3/32"	2.625"	2 11/16"	2.0
10029	1 13/16"	1 1/8	---	---	1 1/4	1 1/8"	2.750"	2 15/16"	2.5
10030	1 7/8"	---	1 1/4	1 1/4	---	1 1/8"	2.750"	2 13/16"	2.3
10031	1 15/16"	---	---	---	---	1 1/8"	2.875"	2 13/16"	2.7
10032	2"	1 1/4	---	---	1 3/8	1 1/8"	3.000"	2 13/16"	3.2
10033	2 1/16"	---	1 3/8	1 3/8	---	1 13/16"	3.000"	2 7/8"	3.2
10034	2 1/8"	---	---	---	---	1 7/32"	3.125"	2 15/16"	3.4
10035	2 3/16"	1 3/8	---	---	1 1/2	1 13/32"	3.250"	2 15/16"	4.0
10036	2 1/4"	---	1 1/2	1 1/2	---	1 9/32"	3.375"	3 1/16"	4.1
10037	2 3/8"	---	---	---	---	1 5/16"	3.438"	3 1/8"	4.2
10038	2 3/8"	1 1/2	---	---	---	1 5/16"	3.500"	3 1/8"	4.2

REGULAR SOCKET — 4-POINT (SINGLE SQUARE)

10013S	1 3/16"	---	---	1 1/2	---	1 7/32"	2.000"	2 1/16"	1.16
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REGULAR SOCKETS — 8-POINT (DOUBLE SQUARE)

10018S	1 1/8"	---	3/4	3/4	---	2 1/32"	2.250"	2 1/4"	1.56
10020S	1 1/4"	3/4	---	---	7/8	2 1/32"	2.375"	2 1/4"	1.80
10021S	1 3/8"	---	7/8	7/8	---	3 1/4"	2.563"	2 5/16"	2.2
10023S	1 7/8"	7/8	---	---	1	3 13/16"	2.625"	2 7/16"	2.3

EXTRA DEEP SOCKETS — 6-POINT (SINGLE HEXAGON)

10015L	1 5/16"	9/16†	5/8	---	5/8	1 1/16"	2.000"	3 1/2"	2.1
10017L	1 1/16"	5/8	---	---	3/4	3 1/4"	2.125"	3 1/8"	2.3
10020L	1 1/4"	3/4	---	---	7/8	3 1/4"	2.125"	3 1/8"	2.2
10024L	1 1/2"	---	1	1	---	15 1/16"	2.313"	3 1/2"	2.4

†Does Not Apply to USS Nuts.

POWER OR HAND SOCKET WRENCHES

For Heavy-Duty Use on Manual Attachments and All Types of Power Drive

PROTOLOY[®] alloy steels and advanced design provide these power sockets with great strength, toughness, snug fit, freedom from slipping, and maximum clearance for speed and ease in handling. All of these features give long life and a high safety factor.

They fit Black & Decker, Chicago Pneumatic, Ingersoll-Rand, Thor and other makes of power tools and wrenches. They also fit regular socket wrench handles and

® Registered U. S. Pat. Off.

attachments, and therefore are ideal for many jobs demanding strength greater than provided in regular manual sockets.

PROTO power sockets are used extensively by all types of manufacturers for assembly and maintenance work, and are noted for their outstanding performance. They are popular also with mechanics for tractor, truck, bus and car repairing.

The very complete line provides the right power socket for almost every need.

1/4" SQ. DRIVE POWER OR HAND SOCKETS AND ATTACHMENTS

REGULAR SOCKETS — 6-POINT

NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXIMUM DIAM.	OVER-ALL LGTH.	WT., LBS.
6906H	3/16"	7/32"	.438"	1 1/16"	.02
6907H	7/32"	15/64"	.438"	1 1/16"	.02
6908H	1/4"	1/4"	.438"	1 1/16"	.03
6909H	9/32"	1/4"	.500"	1 1/16"	.03
6910H	5/16"	1/4"	.500"	1 1/16"	.03
6911H	11/32"	9/32"	.500"	1 1/16"	.03
6912H	3/8"	5/16"	.531"	1 1/16"	.03
6914H	7/16"	11/32"	.625"	1 1/16"	.05
6916H	1/2"	11/32"	.688"	1 1/16"	.06

REGULAR SOCKETS FOR SELF-TAPPING SCREWS — 6-POINT

NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXIMUM DIAM.	OVER-ALL LGTH.	WT., LBS.
6908PK	1/4"	1/8"	.438"	1 1/16"	.02
6910PK	5/16"	5/32"	.500"	1 1/16"	.03
6912PK	3/8"	11/64"	.531"	1 1/16"	.03

REGULAR SOCKETS — 8-POINT

NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXIMUM DIAM.	OVER-ALL LGTH.	WT., LBS.
6908S	1/4"	1/4"	.500"	1 1/16"	.03
6910S	5/16"	1/4"	.625"	1 1/16"	.06
6912S	3/8"	1/2"	.656"	1 1/16"	.06
6914S	7/16"	11/32"	.750"	1 1/16"	.08



Regular 6-Pt. Socket



Regular 8-Pt. Socket

POWER SOCKET EXTENSIONS

1/4" Square by 1/4" Hexagon Drive			
NO.	SHANK DIAM.	LENGTH	WT., LBS.
7102	3/8"	2"	.03

1/4" Square by 7/16" Hexagon Drive			
NO.	SHANK DIAM.	LENGTH	WT., LBS.
7109	1/2"	1 5/8"	.05

3/8" DR. POWER OR HAND SKTS.

REGULAR SOCKETS — 6-POINT

NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXIMUM DIAM.	OVER-ALL LGTH.	WT., LBS.
7210H	5/16"	5/16"	.688"	7/8"	.07
7211H	11/32"	5/16"	.688"	7/8"	.07
7212H	3/8"	5/16"	.688"	7/8"	.05
7214H	7/16"	5/16"	.688"	7/8"	.05
7216H	9/16"	5/16"	.750"	7/8"	.06
7218H	5/8"	5/16"	.781"	7/8"	.07
7219H	19/32"	5/16"	.844"	7/8"	.07
7220H	5/8"	5/16"	.875"	7/8"	.10

REGULAR SKTS. — 6-PT. (Contd.)

NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXIMUM DIAM.	OVER-ALL LGTH.	WT., LBS.
7222H	11/16"	7/16"	.938"	1"	.16
7224H	3/4"	7/16"	1.031"	1"	.21

REGULAR SOCKETS FOR SELF-TAPPING SCREWS — 6-POINT

NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXIMUM DIAM.	OVER-ALL LGTH.	WT., LBS.
7210PK	5/16"	5/32"	.688"	7/8"	.05
7212PK	3/8"	11/64"	.688"	7/8"	.05
7214PK	7/16"	3/16"	.750"	1"	.08
7216PK	9/16"	1/4"	.750"	1 1/16"	.07



7102 & 7109



Regular 6-Pt. Socket

NOTE: For STANDARD Nut and Bolt Sizes, Corresponding to NOMINAL Socket Openings, See Chart Opposite Page 68.

3/8" DR. POWER OR HAND SKTS. & ATTS.



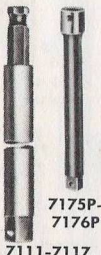
Deep Socket



Universal Socket



Universal Joint



7175P-7176P



Regular 6-Pt. Socket



Regular 8-Pt. Socket

EXTRA DEEP SOCKETS — 6-POINT

NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXIMUM DIAM.	OVER-ALL LGTH.	WT. LBS.
7010H	5/16"	5/16"	.688"	1 1/2"	.10
7011H	11/32"	5/16"	.688"	1 1/2"	.10
7012H	3/8"	5/16"	.688"	1 1/2"	.11
7014H	7/16"	3/8"	.688"	1 1/2"	.09
7016H	1 1/2"	13/32"	.750"	1 1/2"	.09
7018H	9/16"	29/64"	.781"	1 1/2"	.12
7020H	5/8"	1 1/2"	.875"	1 1/2"	.14
7022H	1 1/16"	35/64"	.838"	1 1/2"	.20

EXTRA DEEP SKTS.—6-PT. (Contd.)

NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXIMUM DIAM.	OVER-ALL LGTH.	WT. LBS.
7024H	3/4"	19/32"	1.031"	1 1/2"	.24

BALL-TYPE UNIV. SKTS. — 6-PT.

7273	3/8"	5/16"	.844"	2 3/4"	.24
7274	7/16"	1 1/2"	.844"	2 3/4"	.25
7275	1 1/2"	3 3/8"	.844"	2 3/4"	.25
7276	9/16"	27/64"	.844"	2 3/4"	.26
7277	5/8"	1 1/16"	.844"	2 11/32"	.26

No. 7270 Universal Joint

Ball-type. Length, 2 3/8". Weight, .28 Lb. Parts: Female End—7270PF. Male End—7270PM. Pin—7270PN. Snap Ring—7270SR. Holding Spring—7270SP. Pellet—7270PP. Pellet Spring—7270PS.

Ball-Type Univ. Socket Spare Parts

SKT. NO.	SOCKET END	DRIVE END	PIN	HOLDING SPRING	SNAP RING
7273	7273A	7270PF	7270PN	7270SP	7270SR
7274	7274A	7270PF	7270PN	7270SP	7270SR
7275	7275A	7270PF	7270PN	7270SP	7270SR
7276	7276A	7270PF	7270PN	7270SP	7270SR
7277	7277A	7270PF	7270PN	7270SP	7270SR

POWER SOCKET EXTENSIONS

3/8" Sq. by 7/16" Hex. Dr.				3/8" Sq. by 7/16" Hex. Dr.				3/8" Female by 3/8" Male			
NO.	SHANK DIAM.	LENGTH	WT. LBS.	NO.	SHANK DIAM.	LENGTH	WT. LBS.	NO.	SHANK DIAM.	LENGTH	WT. LBS.
7111	9/16"	2 3/4"	.14	7115	9/16"	8"	.50	7175P	7/16"	3"	.18
7113	9/16"	5"	.30	7117	9/16"	12"	.77	7176P	7/16"	6"	.28

1/2" DR. POWER OR HAND SOCKETS

REGULAR SOCKETS — 6-POINT

NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXIMUM DIAM.	OVER-ALL LGTH.	WT. LBS.
7412H	3/8"	9/32"	.875"	1 1/2"	.13
7414H	7/16"	21/64"	.875"	1 1/2"	.14
7416H	1/2"	3/8"	.938"	1 1/2"	.17
7418H	9/16"	27/64"	.938"	1 1/2"	.17
7419H	19/32"	15/32"	1.000"	1 1/2"	.19
7420H	5/8"	1 1/2"	1.000"	1 1/2"	.17
7422H	11/16"	33/64"	1.063"	1 1/2"	.22
7424H	3/4"	9/16"	1.125"	1 1/2"	.26
7426H	13/16"	39/64"	1.188"	1 1/2"	.38
7428H	7/8"	21/32"	1.281"	1 1/2"	.31
7430H	15/16"	45/64"	1.375"	1 3/4"	.45
7432H	1"	3/4"	1.438"	1 3/4"	.48
7434H	1 1/16"	51/64"	1.500"	2"	.55
7436H	1 1/8"	27/32"	1.563"	2"	.66
7438H	1 3/16"	27/32"	1.688"	2"	.71
7440H	1 1/4"	15/16"	1.750"	2"	.79

REGULAR SOCKETS FOR SELF-TAPPING SCREWS — 6-POINT

7416PK	1/2"	1 1/4"	.938"	1 1/2"	.16
7418PK	9/16"	5/16"	.938"	1 1/2"	.17

REGULAR SOCKETS — 8-POINT

7412S	3/8"	9/32"	.875"	1 1/2"	.16
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REGULAR SKTS. — 8-PT. (Contd.)

NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXIMUM DIAM.	OVER-ALL LGTH.	WT. LBS.
7414S	7/16"	21/64"	.938"	1 1/2"	.17
7416S	1/2"	3/8"	.938"	1 1/2"	.21
7418S	9/16"	27/64"	1.000"	1 1/2"	.26
7420S	5/8"	15/32"	1.125"	1 1/2"	.29
7422S	11/16"	33/64"	1.188"	1 1/2"	.37
7424S	3/4"	9/16"	1.313"	1 1/2"	.44
7426S	13/16"	39/64"	1.375"	1 1/2"	.48
7428S	7/8"	21/32"	1.500"	1 1/2"	.38
7430S	15/16"	45/64"	1.625"	1 3/4"	.58
7432S	1"	3/4"	1.688"	1 3/4"	.60

EXTRA DEEP SOCKETS — 6-POINT

7312H	3/8"	9/32"	.875"	3 1/4"	.33
7314H	7/16"	21/64"	.875"	3 1/4"	.33
7316H	1/2"	3/8"	.938"	3 1/4"	.31
7318H	9/16"	27/64"	.938"	3 1/4"	.37
7320H	5/8"	15/32"	1.000"	3 1/4"	.36
7322H	11/16"	33/64"	1.031"	3 1/4"	.41
7324H	3/4"	9/16"	1.125"	3 1/4"	.59
7326H	13/16"	39/64"	1.188"	3 1/4"	.56
7328H	7/8"	21/32"	1.281"	3 1/2"	.62
7330H	15/16"	45/64"	1.375"	3 1/2"	.86
7332H	1"	3/4"	1.438"	3 1/2"	.90
7336H	1 1/8"	27/32"	1.563"	3 1/2"	1.02

For STANDARD Nut and Bolt Sizes, Corresponding to NOMINAL Socket Openings, See Chart Opposite Page 68.

1/2" SQUARE DRIVE POWER OR HAND SOCKETS, ATTACHMENTS AND SETS

BALL-TYPE UNIVERSAL SOCKETS — 6-POINT

NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXI-MUM DIAM.	OVER-ALL LGTH.	WT., LBS.	NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXI-MUM DIAM.	OVER-ALL LGTH.	WT., LBS.
7474	3/16"	11/32"	1.125"	2 1/8"	.33	7477	5/8"	15/32"	1.125"	2 19/32"	.37
7475	1/2"	3/8"	1.125"	2 1/8"	.35	7478	1 1/16"	3/8"	1.125"	2 5/8"	.37
7476	9/16"	27/64"	1.125"	2 9/16"	.36	7479	3/4"	9/16"	1.125"	2 21/32"	.36



Universal Socket



Universal Joint

Ball-Type Universal Socket Spare Parts

SKT. NO.	SOCKET END	DRIVE END	PIN	HOLDING SPRING	SNAP RING
7474	7474A	7470PF	7470PN	7470SP	7470SR
7475	7475A	7470PF	7470PN	7470SP	7470SR
7476	7476A	7470PF	7470PN	7470SP	7470SR
7477	7477A	7470PF	7470PN	7470SP	7470SR
7478	7478A	7470PF	7470PN	7470SP	7470SR
7479	7479A	7470PF	7470PN	7470SP	7470SR

No. 7470 Universal Joint

Ball-type. Overall length, 2 1/16". Weight, .38 Lb. Parts: Female End—7470PF. Male End—7470PM. Pin—7470PN. Snap Ring—7470SR. Holding Spring—7470SP. Pellet—7470PP. Pellet Spring—7470PS

POWER SOCKET EXTENSIONS

1/2" Sq. by 7/16" Hex. Dr.				1/2" Female x 1/2" Male				1/2" Sq. by 5/8" Hex. Dr.			
NO.	SHANK DIAM.	LENGTH	WT., LBS.	NO.	SHANK DIAM.	LENGTH	WT., LBS.	NO.	SHANK DIAM.	LGTH.	WT., LBS.
7121	1 1/16"	2 3/4"	.17	7180P	5/8"	2"	.23	7131	3/4"	2 3/4"	.25
7123	1 1/16"	5"	.38	7181P	19/32"	5"	.47	7133	3/4"	5"	.52
								7135	3/4"	8"	.89



No. 7400A Package-Set

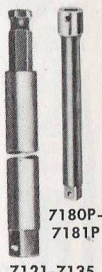
Developed as a merchandising package for PROTO distributors, but ideal also for industrial plants that repair their vehicles and large garages and maintenance shops. Wt., 10.0 Lbs.

Basic 1/2" Drive Sets

Contain six high-utility sockets for impact tools.



7400B



7121-7135

1/2" Drive Sockets

NO.	QUAN.	OP.
7414H	3	7/16"
7416H	6	1/2"
7418H	6	9/16"
7420H	6	5/8"
7422H	4	1 1/16"
7424H	6	3/4"
7426H	3	1 3/16"
7428H	3	7/8"

Additional Items (1 Each)

NO.	DESCRIPTION
4515	Stud Remover, 1/2" Drive
5239	Chevrolet Oil Pan Socket
5245	Chevrolet Oil Pan Socket
5254	Adapter, 1/2" F., 3/8" M.
6522	Cadillac Con. Rod Socket
6523	Ford V8 Con. Rod Socket
7470	Heavy-Duty Universal Joint, 1/2" Drive

Sockets in 7400B

NO.	OP.
7418H	9/16"
7420H	5/8"
7422H	1 1/16"
7424H	3/4"
7426H	1 3/16"
7428H	7/8"

Wt., 1.45 Lbs.

Sockets in 7400C

NO.	OP.
7414H	7/16"
7416H	1/2"
7418H	9/16"
7420H	5/8"
7422H	1 1/16"
7424H	3/4"

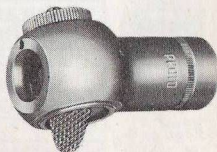
Wt., 1.10 Lbs.

NOTE: For STANDARD Nut and Bolt Sizes, Corresponding to NOMINAL Socket Openings, See Chart Opposite Page 68.

No. 4510 Power Stud Remover and Setter

Fastest, most efficient type available. Rugged, concentric hole design. For removing and setting 1/4" to 7/16" studs and bolts with 1/2" drive power guns or manual socket han-

dles. Single, spring-pressured wedge is reversed by turning knob. Alloy steel. Length, 3 1/2". Weight, 1.00 Lb. Parts: Wedge Assembly — 4511. Revolving Sleeve Assembly — 4512.



5/8" SQUARE DRIVE POWER SOCKETS AND ATTACHMENTS



Regular
6-Pt. Socket



Deep 6-Pt.
Socket



7151-7165

REGULAR SOCKETS — 6-POINT					
NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXI-MUM DIAM.	OVER-ALL LGTH.	WT., LBS.
7618H	9/16"	29/64"	1.063"	1 1/2"	.18
7619H	19/32"	15/32"	1.094"	1 1/2"	.24
7620H	5/8"	1/2"	1.125"	1 1/2"	.22
7622H	1 1/16"	35/64"	1.188"	1 1/2"	.26
7624H	3/4"	19/32"	1.250"	1 1/2"	.28
7626H	13/16"	5/8"	1.281"	1 1/2"	.32
7628H	7/8"	11/16"	1.313"	1 1/2"	.30
7629H	29/32"	23/32"	1.375"	1 3/4"	.41
7630H	15/16"	47/64"	1.438"	2"	.50
7632H	1"	25/32"	1.500"	2"	.57
7634H	1 1/16"	53/64"	1.500"	2"	.64
7636H	1 1/8"	7/8"	1.563"	2"	.73
7638H	1 1/16"	59/64"	1.688"	2"	.79
7640H	1 1/4"	31/32"	1.750"	2"	.89
7642H	1 1/2"	1 1/16"	1.875"	2"	.93
7644H	1 3/4"	1 1/8"	1.938"	2 1/4"	1.20
7646H	1 7/8"	1 1/4"	2.000"	2 1/4"	1.20
7648H	1 1/2"	1 1/2"	2.063"	2 3/8"	1.30

REGULAR SOCKET — 4-POINT					
NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXI-MUM DIAM.	OVER-ALL LGTH.	WT., LBS.
7626S	13/16"	23/32"	1.500"	2"	.98
EXTRA-DEEP SOCKETS — 6-POINT					
7534H	1 1/16"	53/64"	1.500"	3 1/2"	1.06
7536H	1 1/8"	7/8"	1.563"	3 1/2"	1.26
7538H	1 3/8"	59/64"	1.688"	3 1/2"	1.36
7540H	1 1/2"	31/32"	1.750"	3 1/2"	1.50
7542H	1 5/8"	1 1/16"	1.875"	3 1/2"	1.66
7544H	1 3/4"	1 1/8"	1.938"	3 1/2"	1.77
7546H	1 7/8"	1 1/4"	2.000"	3 1/2"	1.80
7548H	1 1/2"	1 1/2"	2.063"	3 1/2"	1.88

No. 7670 Ball-Type Univ. Joint
 Length, 3". Wt., .60 Lb. Parts: Fe-
 male End—7670PF. Male End—7670-
 PM. Pin—7670PN. Snap Ring—7670-
 SR. Holding Spring—7670SP. Pellet
 —7670PP. Pellet Spring—7670PS.

POWER SOCKET EXTENSIONS			
5/8" Sq. by 5/8" Hex. Drive		5/8" Sq. by 3/4" Hex. Drive	
NO.	SHANK DIAM.	LENGTH	WT., LBS.
7151	13/16"	3"	.32
7153	13/16"	5"	.60
7155	13/16"	8"	1.04
7157	13/16"	12"	1.62
7159	13/16"	18"	2.5
5/8" Female by 5/8" Male		5/8" Female by 3/4" Male	
7185P	3/4"	7 7/16"	1.08

Power Adapters

Allow use of 1/2" and 3/4" drive sockets on 5/8" drive guns.

7655 Female, 5/8".
 Male, 1/2". Length,
 1 7/8". Wt., .37 Lb.
 7656 Female, 5/8".
 Male, 3/4". Length,
 2". Wt., .42 Lb.

3/4" SQUARE DRIVE POWER OR HAND SOCKETS

REGULAR SOCKETS — 6-POINT					
NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXI-MUM DIAM.	OVER-ALL LGTH.	WT., LBS.
7820H	5/8"	9/16"	1.375"	1 3/4"	.45
7824H	3/4"	29/64"	1.375"	1 3/4"	.42
7826H	13/16"	19/32"	1.375"	1 7/8"	.44
7828H	7/8"	21/32"	1.375"	2"	.41
7830H	15/16"	11/16"	1.438"	2"	.46
7831H	37/32"	11/16"	1.438"	2"	.51
7832H	1"	3/4"	1.500"	2 1/16"	.51
7834H	1 1/16"	13/16"	1.563"	2 1/8"	.67
7836H	1 1/8"	27/32"	1.625"	2 3/16"	.71
7838H	1 1/4"	7/8"	1.688"	2 1/4"	.82
7840H	1 1/2"	15/16"	1.750"	2 1/4"	.88

REGULAR SKTS. — 6-PT. (Contd.)					
NO.	NOM. OPEN. SIZE	DEPTH OF PUNCHED OPENING	MAXI-MUM DIAM.	OVER-ALL LGTH.	WT., LBS.
7842H	15/16"	31/32"	1.875"	2 5/8"	1.06
7844H	1 3/8"	1 1/32"	1.938"	2 5/8"	1.06
7848H	1 1/2"	1 3/32"	2.125"	2 5/8"	1.30
REGULAR SOCKET — 4-POINT					
7826S	13/16"	1 1/16"	1.625"	2"	.64
EXTRA DEEP SOCKETS — 6-PT.					
7748H	1 1/2"	1 3/32"	2.125"	3 1/2"	1.92
7748HL	1 1/2"	1 3/32"	2.250"	5"	3.5
EXTRA DEEP SOCKET — 4-PT.					
7726SL	13/16"	1 7/32"	1.625"	3 1/2"	1.46

NOTE: For STANDARD Nut and Bolt Sizes, Corresponding to NOMINAL Socket Openings, See Chart Opposite Page 68.

1/4" SQ. DR. MIDGET SOCKET WRENCHES

Midget sockets save time and trouble on little jobs that ordinary sockets can't handle, such as the repair of carburetors, distributors, radios, instruments, etc. They are accurately made from alloy steels for super strength—and scientifically heat treated to insure long, dependable service.

Military Specs.: MIL-W-15838A, Type I, Class 1, Style A; or GGG-W-641, Table 2 (6-Point) and Table 3 (8-Point).

Only Midget Tools can do fast, efficient work on intricate jobs—you should have a complete 1/4" Square Drive assortment.

★REGULAR SOCKETS — 6-, 8-, AND 12-PT.

NO.	OPENING SIZE	NO. OF PTS.	AM. ST. REGULAR		AM. ST. LIGHT (SAE)	OVER-ALL LGTH.	WT., LBS.
			AM. ST. HEAVY	BOLT HEADS	NUTS		
4706	3/16"	6	---	---	---	1"	.02
4707	7/32"	6	---	---	---	1"	.02
4708	1/4"	6	---	---	---	1"	.02
4708S	1/4"	8	---	---	---	1"	.02
4709	9/32"	6	---	---	---	1"	.02
4710	5/16"	6	---	---	---	1"	.02
4710S	5/16"	8	---	---	---	1"	.05
4711	11/32"	6	---	---	---	1"	.03
4712	3/8"	6	---	1/4	---	1"	.03
4712S	3/8"	8	---	1/4	---	1"	.05
4714	7/16"	6	---	---	1/4	1"	.04
4716	1/2"	12	1/4 (N)	5/16	5/16	1"	.05

EXTRA DEEP SOCKETS — 6-POINT

NO.	SIZE OF BIT	LENGTH	WT., LBS.
4708L	1/4"	2"	.04
4709L	9/32"	2"	.04
4710L	5/16"	2"	.04
4711L	11/32"	2"	.07
4712L	3/8"	2"	.09
4714L	7/16"	2"	.11

(N) Nuts Only.

★ For 6-Pt. and 8-Pt. Power Sockets, See Pages 20-25. For Metric Sockets, See Page 7.

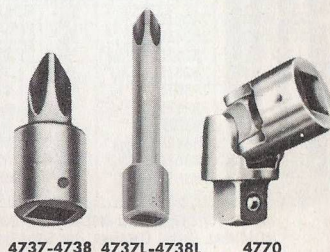
SCREWDRIVER SOCKETS

NO.	SIZE OF BIT	LENGTH	WT., LBS.
4737	Phillips No. 1	1"	.02
4737L	Phillips No. 1	2"	.03
4738	Phillips No. 2	1"	.02
4738L	Phillips No. 2	2"	.03
4744	5/16" x .030"	1 3/4"	.03
4745	1/4" x .030"	3"	.04
†6535	Two-Prong Type	1 1/16"	.02

†Chevrolet Distributor Socket. See Page 53.

No. 4770 Universal Joint

Has 1/4" square female opening and drive plug. Makes work easier when working at a difficult angle. Length, 1 1/32". Wt., .04 Lb.

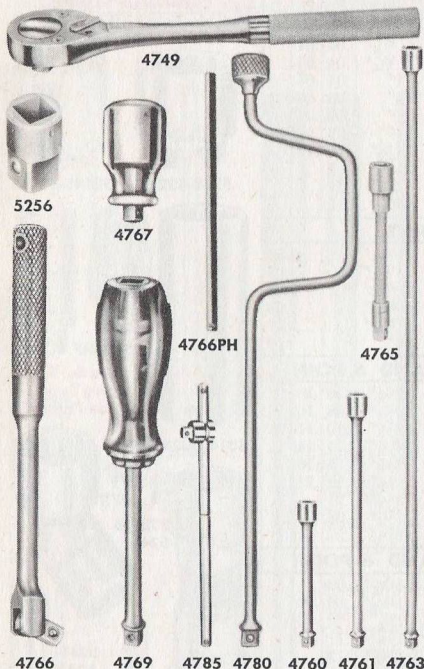


1/4" SQ. DRIVE MIDGET SOCKET WRENCH HANDLES, ATTACHMENTS AND SET

Military Specs.: MIL-W-15838A, or GGG-W-641. Lengths subject to individual requirements.

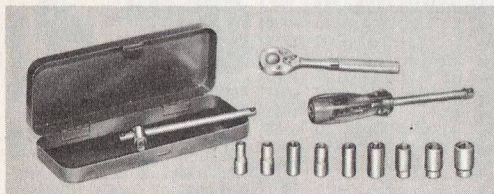
Made from PROTOLOY® alloy steel.

® Registered U.S. Pat. Off.



No. 4700B Set

Here is a complete set of handy midget tools, designed for all kinds of light work where small nuts and bolts must be turned. The set includes a useful selection of basic tools to which you can add others as your needs require.



HANDLES

NO.	DESCRIPTION	OVERALL LENGTH	WT., LBS.
4749	Reversible Ratchet	5"	.21
4766	Hinge Handle	5 3/8"	.15
4766PH	Pin Handle	4"	.03
4767	Stubby Socket Driver, Plastic Handle	2 5/32"	.07
4769	Regular Socket Driver, Plastic Handle	5 7/8"	.16
4780	Speed Handle	16"	.39
4785	Sliding Bar Handle	4 1/2"	.08

PARTS FOR RATCHET 4749

NO.	DESCRIPTION	NO.	DESCRIPTION
4749C	Cover	4749R	Reversing Assembly
4749DL	Dog, Left	4749S	Spring
4749DR	Dog, Right	4749W	Wheel with Plug
4749H	Cover Screw		

ATTACHMENTS

NO.	DESCRIPTION	OVERALL LENGTH	WT., LBS.
4760	Extension	3 1/2"	.05
4761	Extension	6"	.08
4763	Extension	14"	.18
4765	Flexible Extension	4"	.08
4770	Universal Joint	17 3/32"	.04
5256	Adapter, 1/4" F., 3/8" M.	15 1/16"	.03
5255	Adapter, 3/8" F., 1/4" M.	15 1/16"	.05

STEEL SOCKET SET BOX

NO.	DESCRIPTION	OVERALL LENGTH	WT., LBS.
4795	1"x2 1/4"x6 3/4" (Page 66)	6 1/2"	.52

Contents

NO.	DESCRIPTION
4707	Socket, 6-Point, 7/32" Opening
4708	Socket, 6-Point, 1/4" Opening
4708S	Socket, 8-Point, 1/4" Opening
4709	Socket, 6-Point, 9/32" Opening
4710	Socket, 6-Point, 5/16" Opening
4710S	Socket, 8-Point, 5/16" Opening
4711	Socket, 6-Point, 11/32" Opening
4712	Socket, 6-Point, 3/8" Opening
4714	Socket, 6-Point, 7/16" Opening
4749	Reversible Ratchet, 5" Long
4769	Socket Driver, 5 7/8" Long
4785	Sliding Bar Handle, 4 1/2" Long
4795	Steel Box, 1"x2 1/4"x6 3/4"
Weight, 1.20 Lbs.	

3/8" SQ. DRIVE CUB SOCKET WRENCHES

★ REGULAR SOCKETS — 12-POINT AND 6-POINT

NO.			OPEN- ING SIZE	AM. STD. HEAVY	AM. ST. REG.		AM. ST. LIGHT (SAE)	OVER- ALL LGTH.	WT., LBS.		
12- PT.	6- PT.	8- PT.			BOLT HEADS	NUTS			12- PT.	6- PT.	8- PT.
5210	5210H	---	5/16"	---	---	---	---	15/16"	.04	.04	---
5212	5212H	---	3/8"	---	1/4	---	---	15/16"	.04	.05	---
5214	5214H	---	7/16"	---	---	1/4	1/4	1"	.04	.04	---
5216	5216H	---	1/2"	1/4 (N)	5/16	5/16	5/16	1"	.05	.05	---
5218	5218H	---	9/16"	---	3/8	5/16	3/8	1"	.06	.06	---
5220	5220H	---	5/8"	---	7/16	3/8	7/16	1"	.07	.07	---
5222	5222H	---	11/16"	3/8 (N)	---	---	---	1 1/8"	.09	.10	---
5224	---	---	3/4"	---	1/2	7/16	1/2	1 1/8"	.09	---	---
5226	---	---	13/16"	---	---	1/2	---	1 7/8"	.12	---	---
5228	---	---	7/8"	1/2	9/16	9/16	9/16	1 5/8"	.15	---	---

REGULAR SOCKETS — 8-POINT

---	---	5208S	1/4"	---	---	---	---	15/16"	---	---	.04
---	---	5209S	9/32"	---	---	---	---	15/16"	---	---	.05
---	---	5210S	5/16"	---	---	---	---	15/16"	---	---	.04
---	---	5212S	3/8"	---	1/4	---	---	15/16"	---	---	.06
---	---	5214S	7/16"	---	1/4	1/4	---	15/16"	---	---	.07
---	---	5216S	1/2"	1/4 (N)	5/16	---	1"	---	---	---	.10

★ EXTRA DEEP SOCKETS — 12-POINT AND 6-POINT

5012	5012H	---	3/8"	---	1/4	---	---	2 1/8"	.10	.10	---
5014	5014H	---	7/16"	---	1/4	1/4	1/4	2 1/8"	.08	.10	---
5016	5016H	---	1/2"	1/4 (N)	5/16	5/16	5/16	2 1/8"	.10	.11	---
5018	5018H	---	9/16"	---	3/8	5/16	3/8	2 1/8"	.14	.14	---
5020	5020H	---	5/8"	---	7/16	3/8	7/16	2 1/8"	.15	.16	---
5022	5022H	---	11/16"	3/8 (N)	---	---	---	2 1/8"	.19	.21	---
5024	---	---	3/4"	---	1/2	7/16	1/2	2 1/8"	.21	---	---
5026	---	---	13/16"	---	---	1/2	---	2 1/2"	.28	---	---
5028	---	---	7/8"	1/2	9/16	9/16	9/16	2 1/2"	.27	---	---

★ UNIVERSAL SOCKETS — 12-POINT AND 6-POINT

5273	---	---	3/8"	---	1/4	---	---	1 15/32"	.09	---	---
5274	5274H	---	7/16"	---	1/4	1/4	1/4	1 15/32"	.09	.09	---
5275	5275H	---	1/2"	1/4 (N)	5/16	5/16	5/16	1 15/32"	.10	.10	---
5276	5276H	---	9/16"	---	3/8	5/16	3/8	1 5/8"	.11	.11	---
5277	---	---	5/8"	---	7/16	3/8	7/16	1 25/32"	.12	---	---
5278	---	---	11/16"	3/8 (N)	---	---	---	1 15/16"	.13	---	---
5279	---	---	3/4"	---	1/2	7/16	1/2	1 25/32"	.15	---	---
5272	---	---	13/16"	---	---	1/2	---	1 31/32"	.18	---	---

• 4-Pt., for Buick Dynaflo Torque Converter Drain Plug. (N) Nuts Only.

SCREWDRIVER SOCKETS

NO.	SIZE OF BIT	LGTH.	WT., LBS.
5240	5/16" x .040"	3 1/4"	.08
5241	Phillips No. 2	1 5/8"	.05
5242	Phillips No. 3	1 5/8"	.05
5243	Phillips No. 4	1 5/8"	.06
5244	5/8" x .116"	1 1/4"	.08
5246	1/4" x .030"	2"	.06
5239	9/16" x .063"	1 7/8"	.12
5245	1/6" x .051"	1 7/8"	.10

†For Oil Pan Bolts. No. 5239 Fits 1940 and Later Model Chevrolet. No. 5245 Fits 1939 and Earlier Chevrolets.

★ For 6-Pt. Power Skts., See 20-25. ALLEN-TYPE SCREW SOCKETS

NO.	HEX. BIT SIZE	USEABLE BIT LGTH.	OVER-ALL LGTH.	WT., LBS.	BIT ONLY NO.
4990 1/8	1/8"	1"	2 1/16"	.05	4980
4990 5/32	5/32"	1"	2 1/16"	.06	4981
4990 3/16	3/16"	1"	2 1/16"	.06	4982
4990 1/4	1/4"	2"	3 1/16"	.07	4983
4990 5/16	5/16"	1"	2 3/8"	.08	4984
4990 3/8	3/8"	1"	2 3/8"	.09	4985
4990 1/2	1/2"	1 1/2"	2 1/2"	.10	4986
4990 5/8	5/8"	1"	2 1/4"	.11	4987
4990 3/4	3/4"	1"	2 1/4"	.13	4988
4990 7/8	7/8"	1 1/2"	2 3/4"	.14	4989

Military Specs.: MIL-W-15838A, Type I, Class 1, Style A (Reg. Sockets), Style B (Deep Sockets), Style C (Universal Sockets).

Made from alloy steel.



5218-5228

5214S-5216S

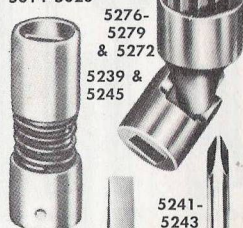


5209S

5026HP

Special Spark Plug Socket— See Page 53.

5014-5028



5276-5279 & 5272

5239 & 5245

5241-5243



5246

5244

Allen Wrench Sets— See Page 52.

4990 1/8 - 4990 7/8 L

4990 1/8 L is for GM Automatic Transmissions, 4990 1/4 L for Chevrolet Camber Adjustment, and 4990 3/8 L for Ford Brakes.

3/8" SQ. DRIVE CUB SOCKET WRENCH HANDLES AND CROWFOOT WRENCHES

Military Specs.: MIL-W-15838A. Lengths subject to individual requirements.

Handles and attachments permit a great number of assemblies. The ratchet is light, trouble-free, long-lived and reversible at flip of lever. Hinge handles, noted for strength and versatility, have hole for inserting pin handle to make a tee or ell attachment. The sliding bar handle provides good leverage with the plug at the end or can be used as a tee handle. Speed handles are for fast running of nuts and bolts.

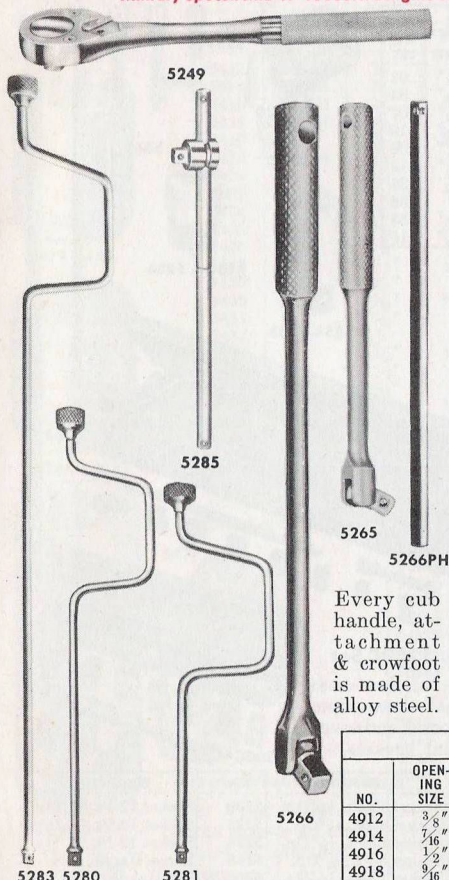
HANDLES			
NO.	DESCRIPTION	LENGTH	WT., LBS.
5249	Reversible Ratchet	7"	.55
5265	Hinge Handle	7 3/8"	.39
5266	Hinge Handle	12"	.83
5266PH	Pin Handle, 5/16" Round Stock	7 1/2"	.16
5280	Speed Handle	16 7/8"	.83
5281	Speed Handle	14 3/32"	.74
5283	Speed Handle	30 3/8"	1.22
5285	Sliding Bar Handle	8"	.31

PARTS FOR RATCHET 5249			
NO.	DESCRIPTION	NO.	DESCRIPTION
5249C	Cover	5249R	Reversing Assembly
5249DL	Dog, Left	5249S	Spring
5249DR	Dog, Right	5249W	Wheel with Plug
5249H	Cover Screw		

STEEL SET BOXES		
NO.	DESCRIPTION	WT., LBS.
5294	Box, 10 $\frac{1}{4}$ " x 2 $\frac{1}{4}$ " x 1 $\frac{1}{4}$ " (Page 66)	.83
5295	Box, 18 $\frac{1}{2}$ " x 5 $\frac{1}{4}$ " x 1 $\frac{1}{2}$ " (Page 66)	1.70

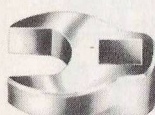
CROWFOOT WRENCHES						
NO.	OPENING SIZE	AM. ST. HEAVY	AM. ST. REGULAR BOLT HEADS NUTS	AM. ST. LIGHT (SAE)	OVER-ALL LENGTH	WT., LBS.
4912	3/8"	---	1/4"	---	1 1/8"	.05
4914	7/16"	---	---	1/4"	1 3/8"	.05
4916	1/2"	1/4(N)	3/16"	3/16"	1 1/2"	.04
4918	9/16"	---	3/8"	3/8"	1 3/4"	.08
4920	5/8"	---	7/16"	7/16"	1 3/8"	.08
4922	11/16"	3/8(N)	---	---	1 3/8"	.08
4924	3/4"	---	1/2"	1/2"	1 3/4"	.14
4926	13/16"	---	1/2"	1/2"	1 3/4"	.12
4928	7/8"	1/2"	9/16"	9/16"	1 3/4"	.12
4932	1"	---	5/8"	---	1 7/8"	.12
4940	1 1/4"	3/4"	---	7/8"	2 1/4"	.23
4944	1 3/8"	---	---	---	2"	.21

(N) Nuts Only.



Every cub handle, attachment & crowfoot is made of alloy steel.

Popular crow-foot wrenches reach starters and do other jobs that normally require special tools.



4912-4944

3/8" SQ. DRIVE CUB SOCKET WRENCH ATTACHMENTS AND SETS

ATTACHMENTS

NO.	DESCRIPTION	LENGTH	WT. LBS.
5256	Adapter, 1/4" Female, 3/8" Male	1 1/16"	.03
5255	Adapter, 3/8" Female, 1/4" Male	1 1/16"	.05
5253	Adapter, 3/8" Female, 1/2" Male	1 3/32"	.07
5254	Adapter, 1/2" Female, 3/8" Male	1 1/16"	.10
5259	Extension	1 3/4"	.09
5260	Extension	3 1/2"	.13
5261	Extension	7 1/2"	.25
5262	Extension	12"	.38
5263	Extension	17 3/16"	.53
5270	Universal Joint	1 5/8"	.10

No. 5200AB Set

Containing seven sockets, three handles, two extensions and a universal joint, this expanded set will handle practically all 3/8" drive socket wrench jobs.

Contents

NO.	DESCRIPTION
5212	Socket, 12-Point, 3/8" Opening
5214	Socket, 12-Point, 7/16" Opening
5216	Socket, 12-Point, 3/2" Opening
5218	Socket, 12-Point, 3/16" Opening
5220	Socket, 12-Point, 5/8" Opening
5222	Socket, 12-Point, 1 1/16" Opening
5224	Socket, 12-Point, 3/4" Opening
5249	Reversible Ratchet, 7" Long
5260	Extension, 3 1/2" Long
5262	Extension, 12" Long
5265	Hinge Handle, 7 3/8" Long
5270	Universal Joint
5280	Speed Handle, 16 7/8" Long
5295	Steel Box, 1 1/2" x 5 1/4" x 18 1/2"

Weight, 4.6 Lbs.

No. 5200AA Set

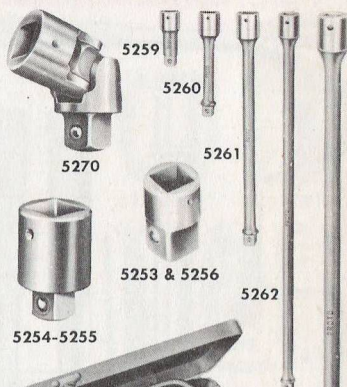
Same as Set No. 5200AB, except in cardboard box instead of No. 5295 steel box. Weight, 3.2 Lbs.

No. 5000B Deep Socket Set

Includes the following nine extra deep 12-point sockets, packed in cardboard box.

NO.	OPENING SIZE	NO.	OPENING SIZE
5012	3/8"	5022	1 1/16"
5014	7/16"	5024	3/4"
5016	1/2"	5026	13/16"
5018	9/16"	5028	7/8"
5020	5/8"		

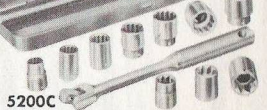
Weight, 1.60 Lbs.



No. 5200C Set

A useful, low-cost set with three popular 8-point and seven 12-point sockets.

NO.	DESCRIPTION
5212	Socket, 12-Pt., 3/8" Op.
5212S	Socket, 8-Pt., 3/8" Op.
5214	Socket, 12-Pt., 7/16" Op.
5214S	Socket, 8-Pt., 7/16" Op.
5216	Socket, 12-Pt., 1/2" Op.
5216S	Socket, 8-Pt., 1/2" Op.
5218	Socket, 12-Pt., 5/8" Op.



NO.	DESCRIPTION
5220	Socket, 12-Pt., 5/8" Op.
5222	Socket, 12-Pt., 1 1/16" Op.
5224	Socket, 12-Pt., 3/4" Op.
5265	Hinge Handle, 7 3/8"
5266PH	Pin Handle, 7 1/2"
5294	Box, 10 1/4" x 2 1/4" x 1 1/4"

Weight, 2.1 Lbs.



1/2" DR. STANDARD SOCKET WRENCHES

Military Specs.: MIL-W-15838A, Type I, Class 1, Style A (Reg. Sockets), Style B (Deep Sockets), Style C (Univ. Skts.).



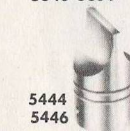
5419-5440



5416S-5434S



5343-5353


5444
5446

★ REGULAR SOCKETS — 12-POINT AND 6-POINT									
NO.		OPENING SIZE	AM. STD. HEAVY	AM. STD. REG.		AM. ST. LIGHT (SAE)	OVER-ALL LENGTH	WT., LBS.	
12-PT.	6-PT.			BOLT HEADS	NUTS			12-PT.	6-PT.
5412	5412H	3/8"	----	1/4	----	----	1 1/16"	.09	.09
5414	5414H	7/16"	----	1/4	----	1/4	1 1/16"	.09	.10
5416	5416H	1/2"	1/4 (N)	5/16	5/16	5/16	1 1/16"	.10	.12
5418	5418H	9/16"	----	3/8	3/8	3/8	1 1/2"	.13	.13
5419	----	1 1/8"	5/16 (N)	7/16	7/16	7/16	1 1/2"	.13	----
5420	5420H	1 1/4"	----	7/16	3/8	7/16	1 1/2"	.15	.12
5421	----	1 1/2"	----	----	----	----	1 1/2"	.15	----
5422	5422H	1 3/4"	3/8 (N)	7/16	7/16	7/16	1 1/2"	.17	.17
5424	5424H	1 7/8"	7/16 (N)	1/2	7/16	1/2	1 1/2"	.20	.21
5425	----	2"	----	1/2	7/16	7/16	1 1/2"	.22	----
5426	----	2 1/8"	1/2	9/16	9/16	9/16	1 3/4"	.30	----
5428	----	2 1/4"	9/16	5/8	5/8	5/8	1 3/4"	.33	----
5429	----	2 3/8"	1"	5/8	5/8	5/8	1 3/4"	.34	----
5430	----	2 1/2"	1"	5/8	5/8	5/8	1 3/4"	.34	----
5431	----	2 3/4"	1 1/8"	5/8	5/8	5/8	1 3/4"	.38	----
5432	----	2 7/8"	1 1/4"	5/8	5/8	5/8	1 3/4"	.42	----
5434	----	3"	1 1/2"	5/8	5/8	5/8	1 3/4"	.50	----
5436	----	3 1/8"	1 3/4"	5/8	5/8	5/8	1 3/4"	.56	----
5438	----	3 1/4"	1 7/8"	5/8	5/8	5/8	1 3/4"	.61	----
5440	----	3 1/2"	2"	5/8	5/8	5/8	1 3/4"	----	----

(N) Nuts Only.

All 1/2" square drive sockets are made of special alloy steel.

5477



★ For 6- and 8-Point Power Sockets, See Pages 20-25.

Screwdriver Sockets

For drag links and large screws on many types of assemblies.

NO.	BIT SIZE	LGTH.	WT., LBS.
5444	3/4" x .115"	1 1/16"	.14
5446	15/16" x .154"	1 1/16"	.20

★ REGULAR SOCKETS — 8-POINT									
NO.		OPENING SIZE	AM. ST. HEAVY	AM. ST. REG.		AM. ST. LIGHT (SAE)	OVER-ALL LENGTH	WT., LBS.	
12-PT.	6-PT.			BOLT HEADS	NUTS			12-PT.	6-PT.
5412S	5412S	3/8"	----	1/4	----	----	1 1/16"	.12	.12
5414S	5414S	7/16"	----	1/4	----	1/4	1 1/16"	.14	.14
5416S	5416S	1/2"	1/4 (N)	5/16	5/16	5/16	1 1/16"	.14	.14
5418S	5418S	9/16"	----	3/8	3/8	3/8	1 1/2"	.20	.20
5420S	5420S	1 1/8"	5/16 (N)	7/16	7/16	7/16	1 1/2"	.23	.23
5422S	5422S	1 1/4"	3/8 (N)	7/16	7/16	7/16	1 1/2"	.30	.30
5424S	5424S	1 1/2"	1/2	9/16	9/16	9/16	1 1/2"	.37	.37
5426S	5426S	1 3/4"	9/16	5/8	5/8	5/8	1 1/2"	.42	.42
5428S	5428S	1 7/8"	1"	5/8	5/8	5/8	1 1/2"	.52	.52
5432S	5432S	2"	1 1/8"	5/8	5/8	5/8	1 1/2"	.76	.76
5434S	5434S	2 1/8"	1 1/4"	5/8	5/8	5/8	1 1/2"	.91	.91

★ EXTRA DEEP SOCKETS — 12-POINT

NO.	OPENING SIZE	AM. ST. HEAVY	AM. ST. REG.	AM. ST. LIGHT (SAE)	OVER-ALL LENGTH	WT., LBS.
5340	1 1/2"	1/4 (N)	5/16	5/16	3 1/4"	.25
5341	1 3/4"	5/8	3/8	3/8	3 1/4"	.27
5343	1 7/8"	3/8 (N)	7/16	7/16	3 1/4"	.28
5344	2"	1/2	9/16	9/16	3 1/4"	.34
5345	2 1/8"	5/8	1"	1"	3 1/4"	.40
5347	2 1/4"	3/4	1 1/8"	1 1/8"	3 1/4"	.40
5347H	2 3/8"	7/8	1 1/4"	1 1/4"	3 1/4"	.32
5348	2 1/2"	1 1/8"	1 1/2"	1 1/2"	3 1/4"	.44
5349	2 3/4"	1 3/8"	1 3/4"	1 3/4"	3 1/4"	.52
5351	3"	1 1/2"	1 7/8"	1 7/8"	3 1/4"	.60
5352	3 1/8"	1 5/8"	2"	2"	3 1/4"	.68
5353	3 1/4"	1 3/4"	2 1/8"	2 1/8"	3 1/4"	.75

★ UNIVERSAL SOCKETS — 12-POINT

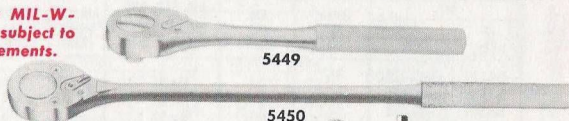
NO.	OPENING SIZE	AM. ST. HEAVY	AM. ST. REG.	AM. ST. LIGHT (SAE)	OVER-ALL LENGTH	WT., LBS.
5475	1 1/2"	1/4 (N)	5/16	5/16	1 1/8"	.17
5476	1 3/4"	5/8	3/8	3/8	1 1/8"	.16
5477	1 7/8"	3/8 (N)	7/16	7/16	1 1/8"	.17

Metric Sockets Are Listed on Page 7 and Thin Nose Sockets on Page 53.

*6-Pt. Max. Clearance for 14-mm. Spark Plugs. †Use 5347H or 5026HP (Page 53) for Spark Plugs.

1/2" SQUARE DRIVE STANDARD SOCKET WRENCH HANDLES

Military Specs.: MIL-W-15838A. Lengths subject to individual requirements.



All 1/2" drive Standard socket handles and attachments (listed on next page) are made from special alloy steel and are chrome plated. With the several types available, many drive combinations can be assembled for handling various jobs.

HANDLES

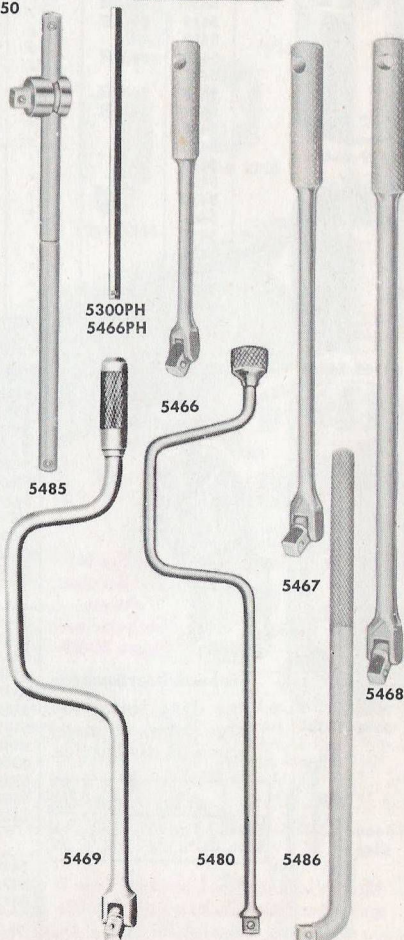
NO.	DESCRIPTION	LENGTH	WT., LBS.
5300PH	Pin Handle, 3/8" Stock, for Turning Deep Sockets	8"	.25
5466PH	Pin Handle, 3/8" Stock, for Turning Extensions and Hinge Handles	11 1/2"	.35
5449	Reversible Ratchet	10 1/4"	1.28
5450	Long Reversible Ratchet	16"	1.82
5466	Hinge Handle, with Hole for Inserting Pin Handle	10"	1.16
5467	Hinge Handle, with Hole for Inserting Pin Handle	15"	1.56
5468	Hinge Handle, with Hole for Inserting Pin Handle	18"	1.67
5469	Speed Hinge Handle, 9/16" Stock, 7" Swing Diam., Ball-Bearing Knurled Grip	18"	1.86
5480	Speed Handle, 1/2" Stock, 7 1/2" Swing Diam., Ball-Bearing Knurled Grip	18"	1.52
5485	Sliding Bar Handle, with Ball to Hold Plug in Tee or Offset Position	13"	.94
5486	Ell Handle	13 1/2"	1.36

PARTS FOR RATCHETS 5449 AND 5450

NO.	DESCRIPTION	NO.	DESCRIPTION
5449C	Cover	5449R	Reversing Assembly
5449DL	Dog, Left	5449S	Spring
5449DR	Dog, Right	5449W	Wheel with Plug
5449H	Cover Screw		

STEEL SET BOXES

NO.	DESCRIPTION	WT., LBS.
5494	Box, 17"x3"x2" (Page 66)	1.86
5495	Box, 19 1/16"x7 1/4"x2" (Page 66)	4.6



1/2" SQUARE DRIVE STANDARD SOCKET WRENCH ATTACHMENTS

Military Specs.: MIL-W-15838A.

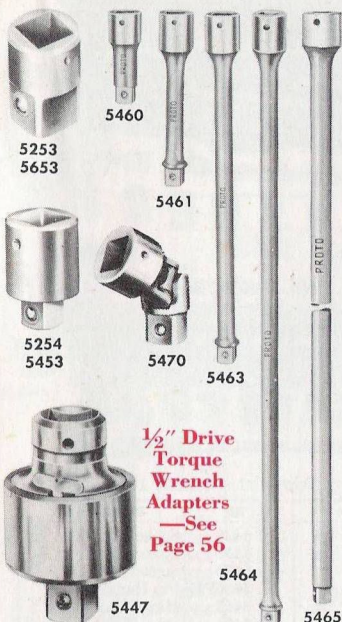
Lengths subject to individual requirements.

Attachments and handles are designed, engineered and manufactured for precise and complete interchangeability. With them, you can make a wide range of combinations for special jobs. Accurate drive ends insure close fitting. They are made from special alloy steel and are chrome plated.

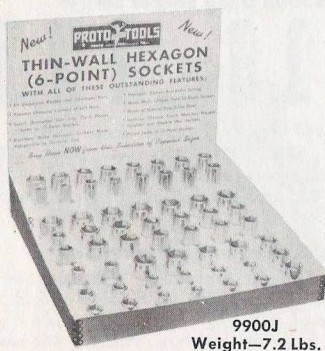
ATTACHMENTS

NO.	DESCRIPTION	LGTH.	WT., LBS.
5253	Adapter, 3/8" Female, 1/2" Male	1 3/32"	.07
5254	Adapter, 1/2" Female, 3/4" Male	1 9/16"	.10
5653	Adapter, 1/2" Female, 3/4" Male	1 1/2"	.22
5453	Adapter, 3/4" Female, 1/2" Male	1 7/8"	.38
5447	"Ratchet" Ratcheting Attachment	2 17/32"	.73
5460	Extension	2 1/2"	.24
5461	Extension	5"	.35
5463	Extension	10"	.63
5464	Extension	18"	1.03
5465	Extension	36"	2.6
5470	Universal Joint	2 1/64"	.18

•Converts any 1/2" drive non-ratcheting handle or attachment into a ratcheting device. Used mainly with a hinge handle, hinge handle plus extension, speed handle or torque wrench. A simple, positive device, huskily built for high torque strength, yet compact for ample clearance. Has very little backdrag. Ratchet has 34 teeth, providing positive engagement every 10 1/2 degrees. Reversing lever acts directly on pawl, eliminating separate cam mechanism and possible misalignment or malfunction.



REGULAR HEX. SOCKET MERCHANDISER



A display-type package, from which users can select thin-wall hexagon sockets. These 6-point sockets can be used wherever corresponding 12-point types will fit. They safely turn undersize, rusted, damaged and soft metal nuts.

No. 9900J Socket Merchandiser Contents

3/8" Drive Regular Sockets

NO.	QUAN.	OP.
5210H	2	5/16"
5212H	2	3/8"
5214H	4	7/8"
5216H	4	1 1/16"
5218H	3	9/16"
5220H	2	5/8"
5222H	2	1 1/16"

3/8" Drive Extra Deep Sockets

NO.	QUAN.	OP.
5012H	2	3/8"
5014H	2	7/16"
5016H	4	1 1/2"
5018H	4	9/16"
5020H	2	5/8"
5022H	2	1 1/16"

1/2" Drive Regular Sockets

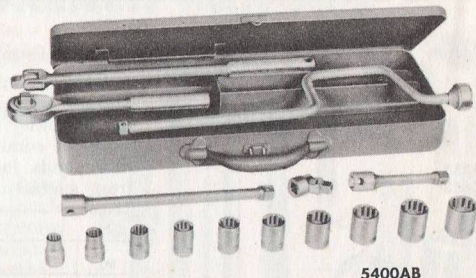
NO.	QUAN.	OP.
5412H	2	3/8"
5414H	2	7/16"
5416H	4	1 1/2"
5418H	4	9/16"
5420H	4	5/8"
5422H	3	1 1/16"
5424H	4	3/4"

1/2" SQ. DRIVE SOCKET WRENCH SETS

No. 5400AB Set

A popular set, containing 17 items:

NO.	DESCRIPTION
5414	Socket, 12-Point, $\frac{7}{16}$ " Opening
5416	Socket, 12-Point, $\frac{1}{2}$ " Opening
5418	Socket, 12-Point, $\frac{9}{16}$ " Opening
5420	Socket, 12-Point, $\frac{5}{8}$ " Opening
5422	Socket, 12-Point, $\frac{11}{16}$ " Opening
5424	Socket, 12-Point, $\frac{3}{4}$ " Opening
5426	Socket, 12-Point, $\frac{13}{16}$ " Opening
5428	Socket, 12-Point, $\frac{7}{8}$ " Opening
5430	Socket, 12-Point, $\frac{15}{16}$ " Opening
5432	Socket, 12-Point, 1" Opening
5449	Reversible Ratchet, $10\frac{1}{4}$ " Long
5461	Extension, 5" Long
5463	Extension, 10" Long
5467	Hinge Handle, 15" Long
5470	Universal Joint
5480	Speed Handle, 18" Long
5495	Steel Box, $1\frac{3}{4}$ "x $8\frac{1}{4}$ "x $19\frac{1}{2}$ "
Weight, 12 Lbs.	



5400AB

No. 5400AA Set

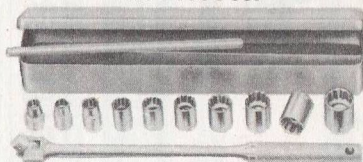
Same as Set No. 5400AB except in cardboard box instead of No. 5495 steel box. Weight, 8.2 Lbs.

No. 5400-OC Set

A complete 27-item "Super Set":

NO.	DESCRIPTION
5414	Socket, 12-Point, $\frac{7}{16}$ " Opening
5416	Socket, 12-Point, $\frac{1}{2}$ " Opening
5418	Socket, 12-Point, $\frac{9}{16}$ " Opening
5419	Socket, 12-Point, $\frac{19}{32}$ " Opening
5420	Socket, 12-Point, $\frac{5}{8}$ " Opening
5421	Socket, 12-Point, $\frac{21}{32}$ " Opening
5422	Socket, 12-Point, $\frac{11}{16}$ " Opening
5424	Socket, 12-Point, $\frac{3}{4}$ " Opening
5425	Socket, 12-Point, $\frac{23}{32}$ " Opening
5426	Socket, 12-Point, $\frac{13}{16}$ " Opening
5428	Socket, 12-Point, $\frac{7}{8}$ " Opening
5430	Socket, 12-Point, $\frac{15}{16}$ " Opening
5431	Socket, 12-Point, $\frac{31}{32}$ " Opening
5432	Socket, 12-Point, 1" Opening
5434	Socket, 12-Point, $\frac{11}{16}$ " Opening
5436	Socket, 12-Point, $1\frac{1}{8}$ " Opening
5438	Socket, 12-Point, $1\frac{3}{8}$ " Opening
5440	Socket, 12-Point, $1\frac{1}{4}$ " Opening
5449	Reversible Ratchet, $10\frac{1}{4}$ " Long
5460	Extension, $2\frac{1}{2}$ " Long
5461	Extension, 5" Long
5463	Extension, 10" Long
5466PH	Pin Handle, $11\frac{1}{2}$ " Long
5468	Hinge Handle, 18" Long
5470	Universal Joint
5480	Speed Handle, 18" Long
5495	Steel Box, $1\frac{3}{4}$ "x $8\frac{1}{4}$ "x $19\frac{1}{2}$ "
Weight, 15 Lbs.	

No. 5400C Set



A high-utility, low-cost set with 13 items:

NO.	DESCRIPTION
5414	Socket, $\frac{7}{16}$ " Op.
5416	Socket, $\frac{1}{2}$ " Op.
5418	Socket, $\frac{9}{16}$ " Op.
5420	Socket, $\frac{5}{8}$ " Op.
5422	Socket, $\frac{11}{16}$ " Op.
5424	Socket, $\frac{3}{4}$ " Op.
5426	Socket, $\frac{13}{16}$ " Op.

NO.	DESCRIPTION
5428	Socket, $\frac{7}{8}$ " Op.
5430	Socket, $\frac{15}{16}$ " Op.
5432	Socket, 1" Op.
5466PH	Pin Handle, $11\frac{1}{2}$ "
5467	Hinge Handle, 15"
5494	Steel Box, 17 "x 3 "x 2 "
Weight, 5.8 Lbs.	

No. 5300B Deep Socket Set



Includes nine $\frac{1}{2}$ " drive 12-point deep sockets—Nos. 5340, 5341, 5343, 5344, 5345, 5347, 5348, 5349 and 5351—with openings of $\frac{1}{2}$ ", $\frac{9}{16}$ ", $\frac{5}{8}$ ", $\frac{11}{16}$ ", $\frac{3}{4}$ ", $\frac{13}{16}$ ", $\frac{7}{8}$ ", $\frac{15}{16}$ " and 1". Packed in cardboard box. Weight, 3.4 Lbs.

No. 5300E Spark Plug Socket Set

No. 5300PH pin handle and seven deep sockets—Nos. 5343, 5344, 5347, 5347H, 5348, 5349 and 5351—with openings of $\frac{5}{8}$ ", $\frac{11}{16}$ ", $\frac{13}{16}$ ", $\frac{7}{8}$ ", $\frac{15}{16}$ ", $\frac{1}{2}$ " and 1". Packed in cardboard box. Weight, 3.3 Lbs.

3/4" SQUARE DRIVE HEAVY-DUTY SOCKET WRENCHES AND ATTACHMENTS

Military Specs.: MIL-W-15838A, Type I, Class 1, Style A for Sockets, and MIL-W-15838A for Attachments (Lengths subject to individual requirements).

These sturdy fine alloy steel tools are used by mechanics and industrial workers who need strength, power, speed and safe operation on really tough jobs. They are essential for the maintenance and installation of heavy machinery and for the repair of trucks, buses, automobiles, tractors and farm implements. An outstanding feature of these sockets, which saves time and money, is their extra length.

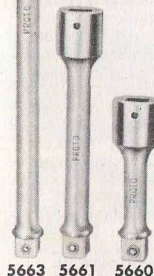


5528-5568



5670


5653
5853

5453
5854


5663 5661 5660



5647

★ REGULAR SOCKETS — 12-POINT

NO.	NOMINAL OPENING SIZE	AM. STD. HEAVY	AM. STD. REGU- LAR	AM. STD. LIGHT (SAE)	OVER- ALL LENGTH	INSIDE CLEAR- ANCE	OUTSIDE DIAM- ETER	WT., LBS.
5528	7/8"	1/2	9/16	9/16	2"	1"	1.280"	.31
5530	15/16"	9/16	5/8(B)	5/8	2"	1"	1.380"	.38
5532	1"	5/8	5/8(N)	5/8	2"	1 1/4"	1.450"	.47
5534	1 1/16"	5/8	3/4	3/4	2 1/16"	1 1/16"	1.530"	.49
5536	1 1/8"	3/4	3/4	3/4	2 1/8"	1 1/8"	1.590"	.63
5538	1 1/4"	3/4	3/4	3/4	2 1/4"	1 1/4"	1.650"	.69
5540	1 1/2"	3/4	3/4	3/4	2 1/2"	1 1/2"	1.715"	.73
5542	1 5/8"	3/4	3/4	3/4	2 5/8"	1 5/8"	1.840"	1.04
5544	1 3/4"	3/4	3/4	3/4	2 3/4"	1 3/4"	1.900"	1.15
5546	1 7/8"	3/4	3/4	3/4	2 7/8"	1 7/8"	1.970"	1.26
5548	1 1/2"	3/4	3/4	3/4	3 1/2"	2 3/4"	2.030"	1.64
5550	1 5/8"	3/4	3/4	3/4	3 1/2"	2 3/4"	2.095"	1.72
5552	1 3/4"	3/4	3/4	3/4	3 1/2"	2 3/4"	2.220"	1.98
5554	1 1/2"	3/4	3/4	3/4	3 1/2"	2 3/4"	2.345"	2.3
5556	1 1/4"	3/4	3/4	3/4	3 1/2"	2 3/4"	2.345"	2.2
5558	1 1/8"	3/4	3/4	3/4	3 1/2"	2 3/4"	2.470"	2.4
5560	1 1/8"	3/4	3/4	3/4	3 1/2"	2 3/4"	2.575"	2.7
5564	2"	3/4	3/4	3/4	3 1/2"	2 3/4"	2.715"	3.1
5568	2 1/8"	3/4	3/4	3/4	3 1/2"	2 3/4"	2.900"	3.6
5570	2 1/4"	3/4	3/4	3/4	3 1/2"	2 3/4"	3.000"	4.1
5572	2 1/2"	3/4	3/4	3/4	3 1/2"	2 3/4"	3.095"	3.5
5576	2 3/8"	3/4	3/4	3/4	3 1/2"	2 3/4"	3.220"	3.9

(B) Bolt Heads Only. (N) Nuts Only.

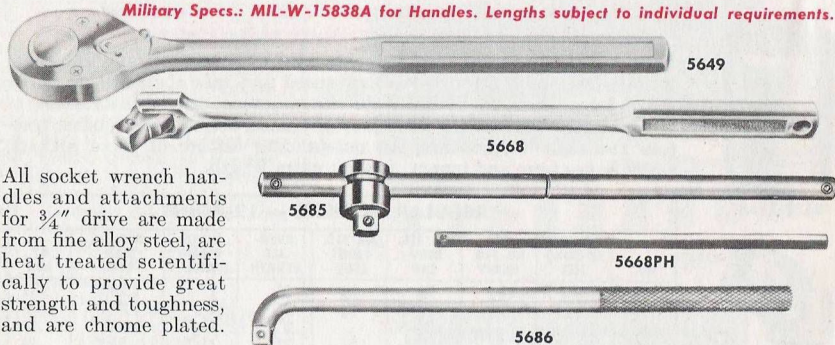
★ For 6-Point Power Sockets, See Pages 20-25.

ATTACHMENTS

NO.	DESCRIPTION	LGTH.	WT., LBS.
5653	Adapter, 1/2" Female, 3/4" Male	1 1/2"	.22
5453	Adapter, 3/4" Female, 1/2" Male	1 1/8"	.38
5853	Adapter, 3/4" Female, 1" Male	2 1/4"	.70
5854	Adapter, 1" Female, 3/4" Male	2 3/4"	1.34
5647	"Ratchetor" Ratcheting Attachment	4 3/32"	2.5
5660	Extension	5"	.91
5661	Extension	8"	1.36
5663	Extension	16"	2.2
5670	Universal Joint	3 9/16"	.96

3/4" SQ. DRIVE HEAVY-DUTY SOCKET WRENCH HANDLES AND SET

Military Specs.: MIL-W-15838A for Handles. Lengths subject to individual requirements.



All socket wrench handles and attachments for $\frac{3}{4}$ " drive are made from fine alloy steel, are heat treated scientifically to provide great strength and toughness, and are chrome plated.

PARTS FOR RATCHET 5649

NO.	DESCRIPTION	NO.	DESCRIPTION
5649C	Cover	5649R	Reversing Assembly
5649DL	Dog, Left	5649S	Spring
5649DR	Dog, Right	5649W	Wheel with Plug
5649H	Cover Screw		

STEEL SOCKET SET BOX

NO.	DESCRIPTION	WT., LBS.
5695	22 $\frac{1}{2}$ " x 8" x 3 $\frac{3}{4}$ " (Page 66)	9.0

HANDLES

NO.	DESCRIPTION	LGTH.	WT., LBS.
5649	Reversible Ratchet	20"	6.2
5668	Hinge Handle, with Hole for Inserting Pin Handle	22"	3.8
5668PH	Pin Handle, $\frac{1}{2}$ " Stock	12"	.62
5685	Sliding Bar Handle, with Ball To Hold Plug in Tee or Offset Position	18 $\frac{1}{2}$ "	3.1
5686	Ell Handle	16"	4.2

No. 5500NR Heavy-Duty Socket Set

Designed for tough service, this set is ideal for all types of heavy work. The eight sockets are the sizes used the most in $\frac{3}{4}$ " drive. Wt., 30 Lbs.



5500NR

No. 5500NR Contents

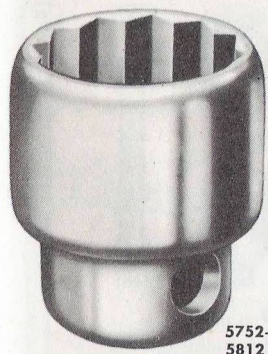
NO.	DESCRIPTION
5534	Socket, 12-Point, $\frac{1}{16}$ " Opening
5536	Socket, 12-Point, $\frac{1}{8}$ " Opening
5540	Socket, 12-Point, $\frac{1}{4}$ " Opening
5542	Socket, 12-Point, $\frac{3}{8}$ " Opening
5546	Socket, 12-Point, $\frac{1}{2}$ " Opening
5548	Socket, 12-Point, $\frac{3}{4}$ " Opening
5552	Socket, 12-Point, $\frac{1}{2}$ " Opening
5556	Socket, 12-Point, $\frac{3}{4}$ " Opening
5649	Reversible Ratchet, 20" Long
5661	Extension, 8" Lg.
5685	Sliding Bar Handle, 18 $\frac{1}{2}$ " Lg.
5695	Steel Box, 22 $\frac{1}{2}$ " x 8" x 3 $\frac{3}{4}$ "

1" SQUARE DRIVE EXTRA HEAVY-DUTY SOCKET WRENCHES AND HANDLES

Military Specs.: MIL-W-15838A, Type II, Class 2, Style A for Sockets.

These alloy steel huskies are for extra heavy, tough work. They are designed for great

strength, but are streamlined to reduce weight and user fatigue.



5752-
5812

REGULAR SOCKETS — 12-POINT

NO.	NOMINAL OPENING SIZE	AM. STD. HEAVY	AM. STD. REGU- LAR	AM. STD. LIGHT (SAE)	OVER- ALL LENGTH	INSIDE CLEAR- ANCE	OUTSIDE DIAM- ETER	WT., LBS.
5752	1 5/8"	1	----	1 1/8"	3 1/4"	2 1/4"	2.370"	1.73
5758	1 3/16"	1 1/8"	----	1 1/4"	3 5/16"	2 5/16"	2.495"	1.85
5760	1 7/8"	----	1 1/4"	----	3 3/8"	2 3/8"	2.557"	1.94
5764	2"	1 1/4"	----	1 3/8"	3 7/16"	2 7/16"	2.745"	2.2
5770	2 3/16"	1 3/8"	----	1 1/2"	3 3/4"	2 3/4"	2.995"	3.1
5772	2 1/4"	----	1 1/2"	----	3 13/16"	2 13/16"	3.120"	3.4
5776	2 3/8"	1 1/2"	----	----	3 15/16"	2 15/16"	3.245"	3.9
5780	2 1/2"	----	----	----	4"	3"	3.495"	4.9
5782	2 3/16"	1 5/8"	----	----	4"	3"	3.495"	4.6
5784	2 5/8"	----	1 3/4"	----	4 1/8"	3 1/8"	3.620"	5.2
5788	2 3/4"	1 3/4"	----	----	4 3/8"	3 3/8"	3.807"	6.2
5794	2 15/16"	1 7/8"	----	----	4 5/8"	3 5/8"	4.057"	7.7
5796	3"	----	2	----	4 5/8"	3 1/2"	4.120"	7.9
5800	3 1/8"	2	----	----	4 7/8"	3 7/8"	4.307"	9.6
5812	3 1/2"	2 1/4"	----	----	5 1/2"	4 1/2"	4.932"	15

HANDLES

NO.	DESCRIPTION	LGTH.	WT., LBS.
5848	Reversible Ratchet ("Big Bertha"), with 1" Square Female Wheel	26"	11
5849	Reversible Ratchet ("Big Bertha"), with 1" Square Male Adapter Plug 5852	26"	12
5868	Hinge Handle	26"	7.7
5884	Bar, 1" Stock, for Turning Sockets and for Use with Plug 5885 To Form Sliding Bar Handle	24"	5.3
5885	Sliding Plug, with Ball To Hold in Tee or Offset Position on 5884 Bar	2 7/32"	1.40

Military Specs.: MIL-W-15838A.
Lengths subject to individual requirements.

PARTS FOR RATCHETS 5848 & 5849

NO.	DESCRIPTION	NO.	DESCRIPTION
5848C	Cover	5848S	Spring
5848DL	Dog, Left	5848W	Female Wheel
5848DR	Dog, Right	5852	1" Sq. Male Plug for Converting Ratchet 5848 to 5849. Wt., .72 Lb.
5848H	Cover Screw		
5848R	Reversing Assembly		

STEEL SOCKET SET BOX

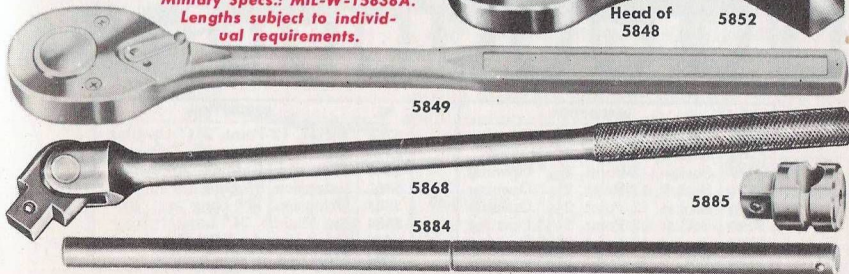
NO.	DESCRIPTION	WT., LBS.
5894	30"x8 1/4"x5" (Page 66)	14



Head of
5848



5852



5849

5868

5884

5885

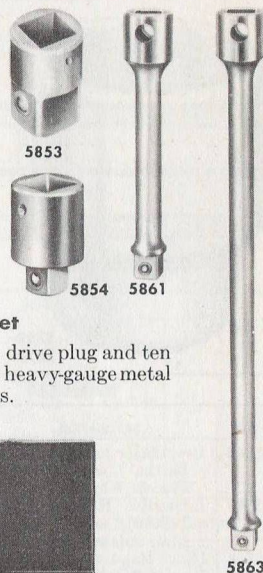
1" SQUARE DRIVE EXTRA HEAVY-DUTY SOCKET WRENCH ATTACHMENTS & SET

All 1" drive socket handles and attachments listed on the preceding page and this page are made from PRO-TOLOY® special alloy steels. They are scientifically heat treated to provide great strength and toughness. Extra heavy-duty sockets and attachments have many applications in refineries, shipyards, power plants, railroad repair shops, plants with heavy machinery, etc.

® Registered U.S. Pat. Off.

Military Specs.: MIL-W-15838A for Attachments. Lengths subject to individual requirements.

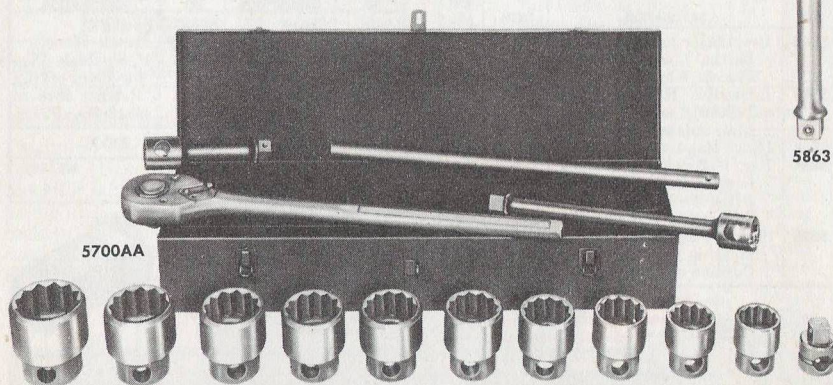
ATTACHMENTS				
NO.	DESCRIPTION	LGTH.	WT., LBS.	
5853	Adapter, 3/4" Female, 1" Male	2 1/4"	.70	
5854	Adapter, 1" Female, 3/4" Male	2 3/4"	1.34	
5861	Extension, with 1" Hole in Female End for Turning with 5884 Bar	8"	2.5	
5863	Extension, with 1" Hole in Female End for Turning with 5884 Bar	17"	4.5	



No. 5700AA Extra Heavy-Duty Socket Set

An ideal set for really tough jobs that demand extra sturdy tools. It is serviceable and complete, including a ratchet,

two extensions, bar, drive plug and ten socket wrenches in a heavy-gauge metal box. Weight, 82 Lbs.



NO.	DESCRIPTION
5760	Socket, 12-Point, 1 7/8" Opening
5764	Socket, 12-Point, 2" Opening
5770	Socket, 12-Point, 2 1/16" Opening
5772	Socket, 12-Point, 2 1/4" Opening
5776	Socket, 12-Point, 2 3/8" Opening
5780	Socket, 12-Point, 2 1/2" Opening
5782	Socket, 12-Point, 2 5/8" Opening
5784	Socket, 12-Point, 2 3/4" Opening

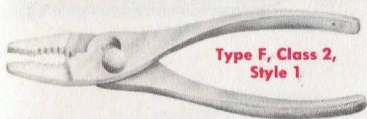
NO.	DESCRIPTION
5788	Socket, 12-Point, 2 3/4" Opening
5794	Socket, 12-Point, 2 5/8" Opening
5849	Reversible Ratchet, 26" Long
5861	Extension, 8" Long
5863	Extension, 17" Long
5884	Bar Handle, 24" Long
5885	Drive Plug for 5884 Bar
5894	Steel Box, 5"x8 1/4"x30"

PLIERS

Military Specs.: GGG-P-471A. See individual pliers listed for type, class and style specifications.

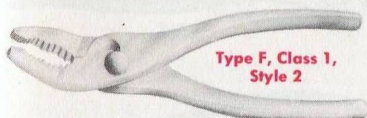
Among the many styles and sizes of pliers available in the extensive PROTO tool line, you can find the right ones for any job. And you are assured of getting high quality.

Skilled workmen, with the aid of modern equipment, forge and machine these pliers to high standards. Long life is insured by their sturdy construction and by the use of fine high-grade steels.



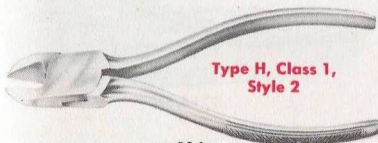
Type F, Class 2,
Style 1

201-202



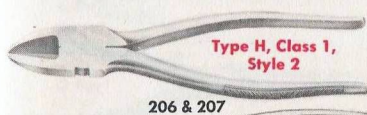
Type F, Class 1,
Style 2

203



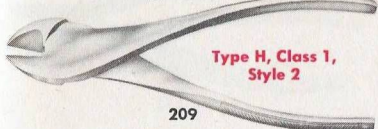
Type H, Class 1,
Style 2

204



Type H, Class 1,
Style 2

206 & 207



Type H, Class 1,
Style 2

209

When you examine these pliers you will find many superior features—the result of years of experience in plier design. They are easy to work. They have good balance—good “feel.” They have correct leverage. Gripping teeth are shaped properly. Sharp cutting edges are perfectly matched and built to withstand hard use. Handles are shaped to fit the hand, giving a comfortable, positive grip.

Nos. 201 & 202 Thin Nose Slip Joint Pliers

Designed with a slim nose to reach into tight places. Have two jaw-opening adjustments and shear-type wire cutter. Handy for all automobile owners and mechanics. Two sizes.

NO.	LENGTH	WEIGHT
201	5"	.25 Lb.
202	6"	.35 Lb.

No. 203 Thin Bent Nose Slip Joint Plier

Made with 30° offset thin nose which reaches into many places inaccessible with straight nose pliers. Handy for pulling small nails and staples. Very useful around home. Has two jaw-opening adjustments and wire cutter of shear type. Length, 7". Weight, .43 Lb.

Nos. 204, 206 & 207 Diagonal Cutting Pliers

Thin, narrow jaws work easily in congested places. Sharp cutting edges are perfectly matched and withstand hard usage. Useful for switchboard, telephone, ignition and other electrical work.

NO.	LENGTH	WEIGHT
204	4½"	.16 Lb.
206	6"	.31 Lb.
207	7"	.46 Lb.

No. 209 Heavy-Duty Diagonal Cutting Plier

A very powerful cutting plier, designed with the joint close to the short jaws to provide great leverage. Cuts heavy wire with little effort. Sharp cutting edges are perfectly matched. Every mechanic needs this plier. Length, 7". Weight, .49 Lb.

Spare Parts for Pliers

NO.	DESCRIPTION
202B	Bolt and Nut for 202, 203, 236, 239, 276 and 278
235B	Bolt and Nut for 230 and 235

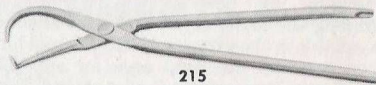
NO.	DESCRIPTION
240B	Bolt and Nut for 240
241B	Bolt and Nut for 241
243B	Bolt and Nut for 243

NO.	DESCRIPTION
257B	Bolt and Nut for 238, 246 and 257
275B	Bolt and Nut for 201 and 275
280B	Bolt and Nut for 280

PLIERS

No. 215 Brake Spring Plier

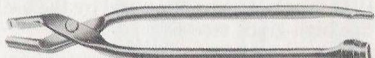
Curved jaw clears edge of brake shoe to bring it in close adjustment with center line of spring. Thin hooked jaw slips easily under spring. A necessary plier for auto mechanics. Length, 12". Weight, .61 Lb.



215

No. 216 Bendix Brake Plier

Three tools in one! Speeds and simplifies Bendix brake repairs. Special jaws remove hold down cups. A cup on one handle end fits over anchor pin and lug lifts off anchor pin springs. Other handle end has shovel for replacing anchor pin springs. Length, 11 $\frac{1}{4}$ ". Weight, .62 Lb.



216

No. 218 Angle Nose Battery Plier

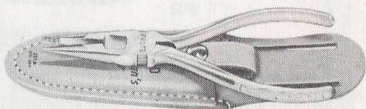
Thin jaws at 30° angle make terminal nuts easily accessible. No matter what condition the nuts or bolts are in, the gripping jaws take a sure hold. Length, 8". Weight, .40 Lb.



218

No. 221A Fisherman's Plier and Sheath Set

Perfect gift for all fishermen, consisting of belt-type leather sheath and 6" all-purpose needle nose plier with heavy chrome plating to prevent rust, even in salt water fishing. Long slim jaws are ideal for extracting hook from fish's mouth, attaching sinkers, fastening either wire or Nylon leaders, making flies, skinning fish, etc. Side cutter easily bites through steel leaders. Plier is handy, too, for repairing reels, outboard motors and other sports equipment. Gold-embossed cowhide leather sheath protects both plier and fisherman. Strap with button clasp prevents loss of plier. Set is packaged in beautiful red and white gift box. Weight, .35 Lb. 221B—Attractive Merchandiser Carton for Dealers with Six No. 221A Sets.



221A Set

No. 222 Long Thin Needle Nose Plier

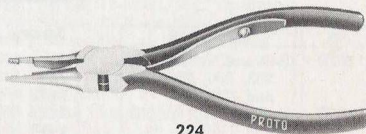
Has very thin nose for getting into places with restricted clearance. Needed for many jobs but especially useful for TV, radio and other electronics work. Length, 6 $\frac{1}{2}$ ". Weight, .26 Lb.



222

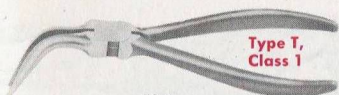
No. 224 Electronics & Ignition Cutting Plier

Slim needle nose type with cutter only $\frac{3}{16}$ " back from tip. For reaching into close quarters to pull or cut wire. Spring on handle holds plier in open position. Used for ignition, television, radio and other electronics assembly and repair work. Length, 6". Weight, .25 Lb.



224

PLIERS

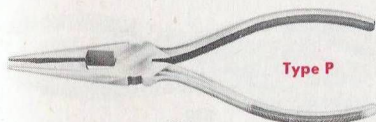


225

Type T,
Class 1

No. 225 Curved Thin Needle Nose Plier

Same as No. 222 plier, except nose is bent at 79° angle. Handy for reaching around objects, as required in radio assembly and numerous other jobs. Has diamond pattern teeth for side holding and pulling. Length, 6". Weight, .26 Lb.



226

Type P

No. 226 Needle Nose Side Cutting Plier

The long nose and the strong, extra sharp side cutters make an ideal combination for radio, telephone and other electrical work. A good long-reach plier. Length, 6". Weight, .28 Lb.

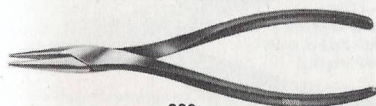


227

Type I

No. 227 Duckbill Plier

A useful plier for carburetor, radio, refrigerator, electrical typewriter, office machine and many other types of work. Long handles provide powerful leverage. Jaws have versatile diamond knurled teeth. Length, 8". Weight, .31 Lb.



228

No. 228 Long Reach Needle Nose Plier

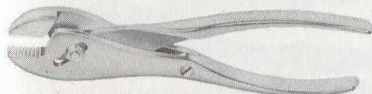
For drawing and looping wire, forming terminals, working in close quarters, and reaching way back into assemblies. Extra length is useful for repair and assembly of instruments, television sets, radios and other electrical equipment. Diamond knurled teeth permit pulling or side holding. Grip, 1 3/8". Length, 8". Weight, .36 Lb.



230

No. 230 Midget Slip Joint Ignition Plier

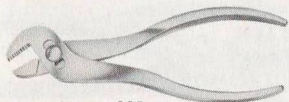
Similar to No. 235 Midget Plier in design, but protected from rust by Parco-Lubrite finish instead of chrome plating and therefore costs less. Has three jaw-opening adjustments. Length, 4 1/2". Weight, .10 Lb.



234

No. 234 "Multi-Plier"

"A chest of tools in one," this revolutionary plier is perfect for countless jobs, and is a "must" for all tool users. Patented, three-piece compound-leverage design multiplies applied pressure ten times! Non-slip jaws open to 1 1/4". Unique diagonal four-position slot gives closer, easier jaw adjustments, and reduces wedge action and wear. Length, 8". Weight, .51 Lb.



235

No. 235 Midget Slip Joint Ignition Plier

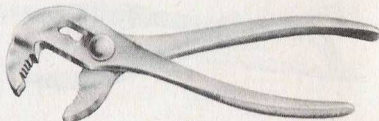
Designed for ignition work but has many other uses where narrow jaws are needed. Light and convenient to use. Has three jaw-opening adjustments. Chrome plated. Length, 4 1/2". Weight, .10 Lb. Also see No. 230 Midget Plier.

PLIERS

Nos. 236 & 238 Parrot Nose Wrench Pliers

Combination plier and pipe wrench, with 75° offset nose. No. 236 has three jaw-opening adjustments and No. 238 has four adjustments. Noted for grip. Ideal for pipe and tubing work.

NO.	LENGTH	WEIGHT
236	6"	.41 Lb.
238	7½"	.61 Lb.



238

No. 239 Wrench Plier

A popular type, with long, slim 20° offset nose and three jaw-opening adjustments. Jaws hold objects in front of center, giving a powerful gripping action. Length, 8". Weight, .54 Lb.

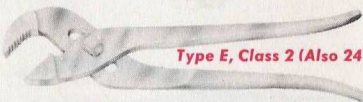


239

Nos. 240 & 241 General Utility Pliers

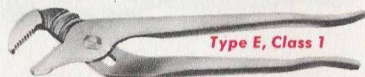
All-purpose pliers, with five jaw-opening adjustments. Teeth are shaped as in a pipe wrench, insuring positive grip on round objects.

NO.	TYPE DUTY	LENGTH	WEIGHT
240	Heavy	9"	.58 Lb.
241	Light	9½"	.52 Lb.



240

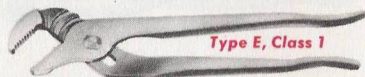
Type E, Class 2 (Also 241)



Type E, Class 1

No. 243 Multiple-Groove Joint Utility Plier

A curved tongue-and-groove type of joint holds the jaws securely in any desired position and takes strain off of bolt. Five grooves provide a wide range of openings for handling hundreds of jobs. Length, 9½". Weight, .81 Lb.



243

No. 246 Comb. Slip Joint Side Cutting Plier

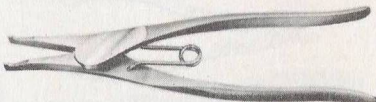
A well-made plier that cuts most wire and nails with ease. Has two jaw-opening adjustments. Length, 6". Weight, .49 Lb.



246

No. 250 Lock Ring & "Horseshoe" Washer Plier

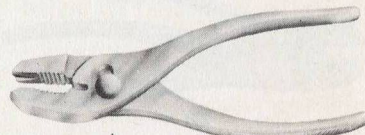
A money-saving dual-purpose plier, for spreading both soft iron "horseshoe" lock washers used on auto brakes and contracting-type tempered steel lock rings used on shafting to locate bearings, gears, etc. Length, 8". Weight, .33 Lb.



250

No. 257 Heavy-Duty Universal Plier

A curved jaw grips objects of almost any shape. Other jaw is grooved for gripping wire, etc. Has a shear-type wire cutter and two jaw-opening adjustments. Length, 7". Weight, .58 Lb.



257

No. 258 Gas Plier

For studs, tubing and pipe. Handles two tube size ranges. Jaw ends have lengthwise tube-gripping teeth. Length, 8". Weight, .62 Lb.



258

Type L

PLIERS

No. 260 Long Thin Nose Telephone Plier

Popular for telephone work and for radio installation and repair. Long thin nose gets into tight places. Has powerful shear-type wire cutter. Length, 6". Weight, .25 Lb.

Nos. 266 & 268 Lineman's Side Cutting Pliers

For utility linemen's work but used also for wiring and electrical equipment installation and maintenance. Useful, too, around filling stations and garages. The sharp edges stand hard usage.

NO.	LENGTH	WEIGHT
266	6"	.43 Lb.
268	8"	.81 Lb.

Nos. 275-280 Slip Joint Pliers

Leaders for general utility, design and service. Have two jaw-opening adjustments and a shear-type wire cutter. Four sizes.

NO.	LENGTH	WEIGHT	NO.	LENGTH	WEIGHT
275	5"	.26 Lb.	278	8"	.50 Lb.
276	6"	.41 Lb.	280	10"	.88 Lb.

ALL-PURPOSE SNIPS

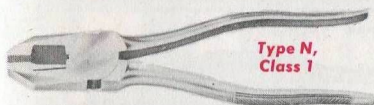
Military Specs.: GGG-S-291B.

Eleven styles and sizes fill needs of industries, mechanics, craftsmen, farmers and home owners. They cut steel, tin, sheet metals, wire, linoleum, canvas, gaskets, roofing, rubber, twine, leather, cardboard, shrubs, flowers and hundreds of other items. Scientifically designed, they give smooth, fast, accurate cuts with little effort, and produce better finished work, clean and unbent. Blades of special steel are hot drop forged for great strength and toughness. Electrically controlled heat treating and tempering give the blades in each snip the same hardness, essential for proper operation and long life.

NO.	DESCRIPTION	OVER-ALL LGTH.	LGTH. OF CUT	WT. LBS.
303L	Multiple-Leverage, Left Cut	10½"	1¾"	.70
303R	Multiple-Leverage, Right Cut	10½"	1¾"	.71
303S	Multiple-Leverg., Straight Cut	10½"	1¾"	.71
307	Duckbill or Circular	7"	1¾"	.41
310	Duckbill or Circular	10"	2½"	.88
312	Duckbill or Circular	12"	3"	1.56
317	Straight or Regular	7"	1¾"	.42
320	Straight or Regular	10"	2½"	.98
322	Straight or Regular	12"	3"	1.47
330	Combination Pattern	10"	2½"	.82
332	Combination Pattern	12"	3"	1.46

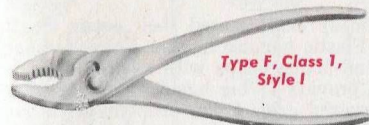


260



266-268

Type N,
Class I



275-280

Type F, Class I,
Style I



303S—

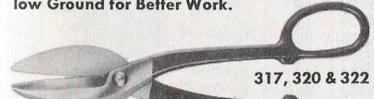
Straight Cut.
Also in Left Cut
& Right Cut

Multiple-Leverage or Aviation Snips—For Intricate Cutting. Compound Action Greatly Increases Power.



307, 310 & 312

Duckbill or Circular Snips—For Cutting Circles and Other Odd Designs. Blades Hollow Ground for Better Work.



317, 320 & 322

Straight or Regular Snips—Handy for Shops, Farms, Homes. Streamlined with Gentle Curves, Rounded Edges.



330 & 332

Combination Snips—For Straight and Moderately Irregular Cuts.

"BET'R-GRIP"® SCREWDRIVERS

® Registered U. S. Pat. Off.

Military Specs.: GGG-S-121-C.

Plastic-Handle Regular Type with Standard Bit



← Underwriters' Laboratories Listed

Plastic-Handle Cabinet Type with Straight Bit



Wood-Handle Regular Type with Standard Bit



There are many reasons for the great popularity of these screwdrivers. Blades are made from fine alloy steels and are scientifically

heat treated their entire length.

Plastic handles feature a revolutionary hand-fitting shape with a large diameter to provide a "big handful" and resulting powerful grip. Extra deep flutes prevent hand slippage and screwdriver rolling. A large bearing surface on the outer handle end allows great pressure with the palm. The plastic is non-explosive, does not burn readily, is a good insulator, and has great toughness.

Favorites for years are the sure-grip, octagon-shaped wood handles. The seasoned hardwood handle is protected on most types by a ferrule and a steel cap.

PLASTIC-HANDLE SCREWDRIVERS

Regular Type—Standard Bit—Round Shank					
NO.	SHANK SIZE	BLADE LENGTH	BIT WIDTH	OVERALL LENGTH	WT., LBS.
9604	1/4"	4"	1/4"	8"	.17
9606	5/16"	6"	5/16"	10 3/8"	.30
9643	5/16"	10"	1 1/32"	14 3/8"	.39
9608	3/8"	8"	3/8"	13"	.47

Regular Type—Standard Bit—Square Shank					
NO.	SHANK SIZE	BLADE LENGTH	BIT WIDTH	OVERALL LENGTH	WT., LBS.
9822	1/8"	2 1/2"	1/8"	5 1/4"	.04
9801	3/16"	1 1/2"	7/32"	4 1/4"	.06
9832	3/16"	4"	7/32"	7 3/8"	.11
9833	3/16"	7 1/2"	7/32"	10 7/8"	.15
9803	1/4"	3"	7/32"	6 3/8"	.13
9804	1/4"	4"	7/32"	8"	.19
9842	1/4"	9"	7/32"	13"	.28
9805	5/16"	5"	5/16"	9 3/8"	.31
9806	5/16"	6"	5/16"	10 3/8"	.36
9843	5/16"	10"	1 1/32"	14 3/8"	.45
9808	3/8"	8"	3/8"	13"	.55
9810	3/8"	10"	3/8"	15"	.62
9812	3/8"	12"	3/8"	17"	.69

Cabinet Type—Straight Bit—Round Shank					
NO.	SHANK SIZE	BLADE LENGTH	BIT WIDTH	OVERALL LENGTH	WT., LBS.
9622	1/8"	2 1/2"	1/8"	5 1/4"	.04
9623	1/8"	3"	1/8"	5 3/4"	.05
9624	1/8"	4"	1/8"	6 3/4"	.06
9625	1/8"	5"	1/8"	7 3/4"	.05
9626	1/8"	6"	1/8"	8 3/4"	.06
9627	1/8"	8"	1/8"	10 3/4"	.06
9631	3/16"	3"	3/16"	6 3/8"	.10
9632	3/16"	4"	3/16"	7 3/8"	.10
9633	3/16"	5"	3/16"	8 3/8"	.13
9634	3/16"	6"	3/16"	9 3/8"	.14
9635	3/16"	8"	3/16"	11 3/8"	.13
9636	1/4"	10"	1/4"	14"	.24
9642	1/4"	12"	1/4"	16"	.26

WOOD-HANDLE SCREWDRIVERS

Regular Type—Standard Bit—Square Shank					
NO.	SHANK SIZE	BLADE LENGTH	BIT WIDTH	OVERALL LENGTH	WT., LBS.
•9701	3/16"	1 1/2"	7/32"	4 5/16"	.09
•9702	3/16"	2 1/2"	7/32"	6 21/32"	.15
•9704	1/4"	4"	1/4"	9 3/8"	.29
•9706	5/16"	6"	5/16"	12 3/8"	.51
•9708	3/8"	8"	3/8"	14 13/16"	.78
•9710	3/8"	10"	3/8"	16 13/16"	.87
•9712	3/8"	12"	3/8"	18 13/16"	.97
•9714	1/2"	13 7/8"	9/16"	22 11/16"	1.55

Long Type—Square Shank					
NO.	SHANK SIZE	BLADE LENGTH	BIT WIDTH	OVERALL LENGTH	WT., LBS.
9722	1/8"	2 1/2"	1/8"	5 3/4"	.06
9724	1/8"	4 1/2"	1/8"	7 3/4"	.07
9732	3/16"	4"	7/32"	8 7/8"	.16
9733	3/16"	7 1/2"	7/32"	12 3/8"	.19
•9741	3/16"	9"	7/32"	13 3/8"	.21
•9742	1/4"	9 1/2"	9/32"	14 13/16"	.38
•9744	1/4"	24"	9/32"	29 11/16"	.64
•9743	5/16"	10"	1 1/32"	16 3/16"	.62

• Has Steel Cap, Riveted to Handle and Blade.

"BET'R-GRIP" SPECIAL SCREWDRIVERS

® Registered U. S. Pat. Off.

Military Specs.: GGG-S-121-C.

Blades of all special screwdrivers are alloy steel.

Phillips Screwdrivers

Drive the full range of Phillips cross-slotted screws.

Plastic-Handle Screwdrivers

NO.	PHILLIPS BIT NO.	SHANK DIAM.	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
9682	1	$\frac{3}{16}$ "	3"	$6\frac{3}{8}$ "	.09
9684	2	$\frac{1}{4}$ "	4"	8"	.17
9686	3	$\frac{5}{16}$ "	6"	$10\frac{3}{8}$ "	.30
9688	4	$\frac{3}{8}$ "	8"	13"	.48
• 9671	2	$\frac{1}{4}$ "	$\frac{3}{16}$ "	$2\frac{7}{16}$ "	.07

Wood-Handle Screwdrivers

9782	1	$\frac{3}{16}$ "	3"	$6\frac{1}{4}$ "	.07
9784	2	$\frac{1}{4}$ "	4"	$8\frac{7}{8}$ "	.18
9786	3	$\frac{5}{16}$ "	6"	$11\frac{7}{8}$ "	.34
9788	4	$\frac{3}{8}$ "	8"	$14\frac{1}{2}$ "	.52

• Stubby Type—For Restricted Clearance Work.

Clutch Head (Fig. 8 or Butterfly) Screwdrivers

Bits are Type G design, preferred in service work.

NO.	BIT SIZE	NOS. OF SCREWS ACCOMMODATED				BLADE LGTH.	OVER. LGTH.	WT., LBS.
		ALL HDS.	FLAT, OVAL	PAN	FILL.			
9693	$\frac{5}{32}$ "	8	6 $\frac{1}{2}$	6, 10	10	$5\frac{1}{8}$ "	$9\frac{1}{8}$ "	.19
9694	$\frac{3}{16}$ "	10	10 $\frac{1}{2}$	12	12	$5\frac{7}{8}$ "	$9\frac{7}{8}$ "	.20
9695	$\frac{1}{4}$ "	14, $1\frac{1}{4}$ "	12			$6\frac{1}{8}$ "	$10\frac{1}{2}$ "	.32
9696	$\frac{5}{16}$ "	$\frac{5}{16}$ "	$5\frac{1}{16}$ "	$\frac{3}{8}$ "	$\frac{3}{8}$ "	$6\frac{1}{8}$ "	$11\frac{1}{8}$ "	.38

†Also #10 Hexagon. ‡Also #10 Truss & #12 Binding. §Also $\frac{3}{4}$ " Truss, Hex. & Binding.

Offset Screwdrivers

For drag link and brake adjustments, and work in close places. Bits at right angles to each other.

NO.	BIT WIDTH	LENGTH	WT., LBS.	NO.	BIT WIDTH	LENGTH	WT., LBS.
35 $\frac{1}{4}$	$\frac{1}{4}$ "	3"	.05	36 $\frac{5}{16}$	$\frac{5}{16}$ "	5"	.11
36 $\frac{1}{4}$	$\frac{1}{4}$ "	$4\frac{3}{4}$ "	.07	36 $\frac{3}{8}$	$\frac{3}{8}$ "	$6\frac{1}{8}$ "	.19

No. 9752 Tappet Wood-Handle Screwdriver

Short and strong. Fine for tappet work and many other jobs. Shank, $\frac{5}{16}$ " sq. Blade length, $1\frac{11}{16}$ ". Bit width, $\frac{1}{32}$ ". Overall length, 6". Weight, .30 Lb.

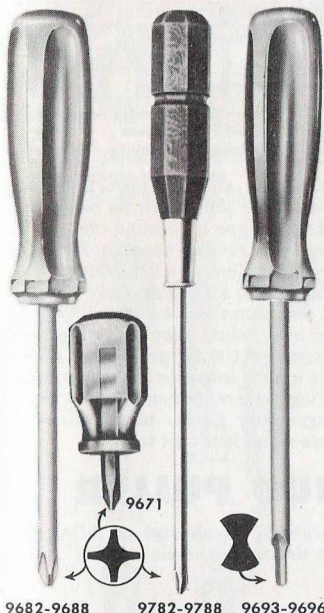
Stubby Plastic-Handle Screwdrivers

Necessary where long handles prevent free turning.

NO.	SHANK SIZE AND SHAPE	BLADE LENGTH	BIT WIDTH	OVERALL LENGTH	WT., LBS.
9651	$\frac{3}{16}$ " Square	1"	$\frac{1}{32}$ "	$2\frac{7}{8}$ "	.07
9652	$\frac{1}{4}$ " Square	$1\frac{1}{2}$ "	$\frac{3}{32}$ "	$3\frac{7}{8}$ "	.12

No. 100 Key Ring Screwdriver

The perfect gift. Has hundreds of uses. Bit width, $\frac{3}{16}$ ". Length, $2\frac{1}{4}$ ". Weight, .015 Lb.



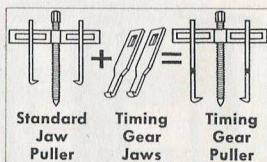
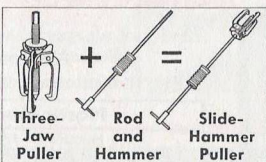
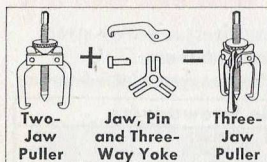
9682-9688 9782-9788 9693-9696



35 $\frac{1}{4}$ -36 $\frac{1}{4}$ 9752 9651-9652 100

Phillips & Standard Screwdriver Sockets — See Pages 26, 28 & 31

MORE JOBS WITH FEWER PULLER PARTS



Many puller lines are so designed that a special puller is needed for every type of job, requiring an enormous investment. If you standardize on PROTO pullers, you can take care of almost all jobs with a relatively few parts. The reason is that **these puller parts are interchangeable.**

For example, a light-duty two-jaw puller can be converted into a three-jaw type by adding a three-way yoke, pin and jaw.

Either a two-jaw or three-jaw light-duty puller can be quickly changed to a slide-hammer type by replacing the screw with

a T-handled rod and hammer. Likewise, the slide-hammer puller can be converted to a light-duty type by adding one screw.

This same screw is used in PROTO medium-duty pullers, so a light-duty puller can be changed to a medium-duty type by adding a crossarm and two jaws.

Regular heavy-duty jaws can be replaced by cap screw or timing gear jaws. All of these jaws are for inside or outside pulling.

In buying pullers, remember that parts interchangeability means more jobs with fewer parts—and less cost to you.

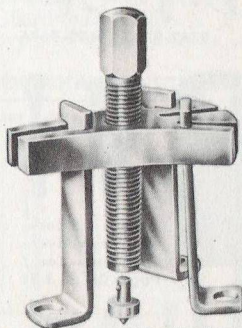
UNIVERSAL WHEEL HUB PULLER

This puller is the simplest and fastest made for hubs and many other pulling requirements. It pulls hubs of most light trucks and cars, including Ford (by using adapter shown). The No. 4001J legs are drilled for $\frac{9}{16}$ " studs and are quickly adjustable to any drum with 3, 4, 5, 6 or 7 studs in a circle up to $6\frac{1}{2}$ "-diameter. The No. 4001JT legs accommodate

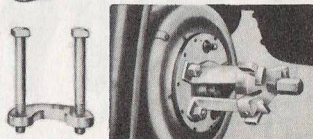
larger $\frac{3}{4}$ " studs and are adjustable on drums in a circle up to 8".

Wheel Hub Puller Parts and Sets

NO.	DESCRIPTION	WT., LBS.	PARTS IN SET 4001	PARTS IN SET 4001A
4001B	Puller Body, $6\frac{3}{4}$ " Long..	3.6	1	1
4001C	Ford Adapter Cap Screw, $4\frac{1}{2}$ " Long.....	.38	2	2
4001J	Leg— $1\frac{5}{16}$ " Leg Offset to Clear Hubs, $3\frac{7}{8}$ " from Crossarm to Offset....	1.00	3	3
4001JT	Leg— $1\frac{3}{4}$ " Leg Offset to Clear Hubs, $3\frac{7}{8}$ " from Crossarm to Offset....	1.00	---	---
4001R	Ford Adapter Ring.....	.64	1	1
4001S	1" Puller Screw, 8" Long, with 4001ST Tip.....	1.43	1	1
4001ST	Detachable Tip for 4001S Screw.....	.06	---	---
4001T	Steel Box, $1\frac{1}{2}$ "x $8\frac{1}{4}$ "x $8\frac{1}{2}$ "	2.2	---	1
Set Weight, Lbs.			9.8	11.7



Assembly of 4001S Screw, 4001B Body & Three 4001J Legs. Detachable Tip Keeps Screw on Center & Reduces Danger of Spreading or Splitting of Axles.

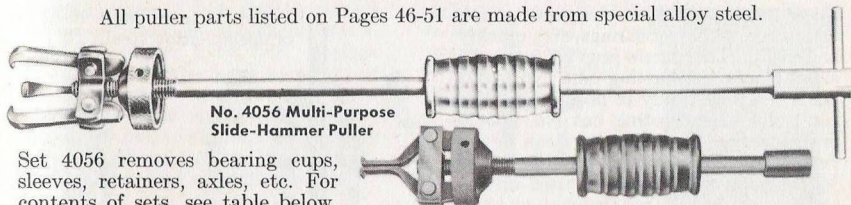


4001R Ford Adapter Ring & 4001C Screws

Pulling a Ford V8 Wheel Hub

SLIDE-HAMMER PULLERS

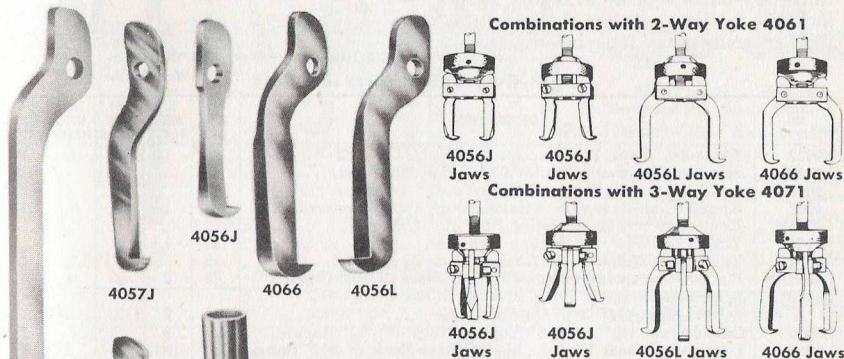
All puller parts listed on Pages 46-51 are made from special alloy steel.



Set 4056 removes bearing cups, sleeves, retainers, axles, etc. For contents of sets, see table below.

No. 4056A Pilot Bearing Puller, for $\frac{3}{8}$ "-1 $\frac{1}{4}$ " Bearings

Combinations with 2-Way Yoke 4061



Combinations with 3-Way Yoke 4071

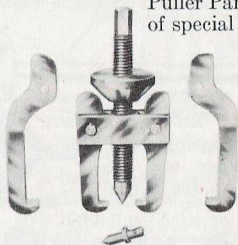
Slide-Hammer Puller Parts and Sets

NO.	DESCRIPTION	WT., LBS.	SET 4056 PARTS	SET 4056A PARTS
†4056R	T-Handled Rod, 24" Long.....	1.90	1	.....
†4056RS	Short Rod, 12 $\frac{3}{8}$ " Long, for Close Places and for Assembling Valve or Blind Bearing Puller.	.96	.....	1
†4056H	Sliding Hammer with Fluted Grip.....	2.7	1	1
†4056N	Knurled Reversible Adjusting Nut, 2 $\frac{1}{2}$ " Diam.	.75	1	1
4063	Knurled Non-Reversible Adjusting Nut, 1 $\frac{3}{4}$ " Dia.	.28	.....	.....
4061	Yoke, 2 $\frac{1}{2}$ " Wide, for Holding Two Jaws.....	.23	.....	1
4071	Yoke, 2 $\frac{1}{2}$ " Diameter, for Holding Three Jaws.	.32	1	.....
†4056PN	Pin for Holding Jaw in Yoke.....	.03	3	2
4056C	Slotted Cap Screw Pulling Crossarm, 6" Wide....	1.10	.....	.....
4056J	Reversible Jaw, 3 $\frac{1}{2}$ " Long, 2" Yoke to Hook, 1 $\frac{3}{8}$ "-4 $\frac{1}{8}$ " Inside and 0"-2 $\frac{3}{16}$ " Outside Ranges. .	.11	3	.....
4057J	Long Reversible Jaw, 4 $\frac{5}{8}$ " Long, 3 $\frac{3}{16}$ " Yoke to Hook, 1 $\frac{1}{8}$ "-3" Inside and 0"-5" Outside Ranges.	.18	.....	.....
4058J	Ins. Jaw, 3 $\frac{3}{32}$ " L., 1 $\frac{1}{4}$ " Yoke to Hook, 1"-2 $\frac{1}{4}$ " Range.	.10	.....	2
4056L	Ins. Jaw, 4 $\frac{1}{2}$ " L., 3" Yoke to Hook, 1 $\frac{5}{8}$ "-6 $\frac{3}{4}$ " Range.	.21	.....	.....
4066	Outs. Jaw, 4 $\frac{9}{16}$ " L., 3" Yoke to Hook, 0"-5 $\frac{1}{16}$ " Range.	.21	.....	.....
4067	Long Outside Jaw, 7 $\frac{1}{32}$ " Long, 6 $\frac{1}{8}$ " Yoke to Hook, 0"-8 $\frac{3}{4}$ " Range.	.30	.....	.....
4056S	Single Jaw, 2 $\frac{15}{16}$ " L., for Wheel Alignment, Brakes, Pulling Grease Retainers, Small Bearings, etc.	.17	.....	.....
†Shown in Illustration at Top of Page.		Set Weight, Lbs.	6.5	4.9

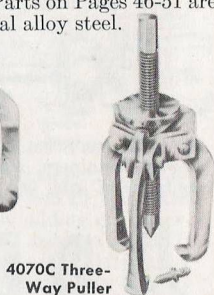
LIGHT-DUTY PULLERS

These small pullers are designed to pull little gears, pulleys, bearings, etc., quickly and easily. The narrow jaws get into very close places. Adjusting nut No. 4063 holds the jaws firmly in position so they can't slip. If adjusting nut No. 4056N is substituted, the short jaws can be reversed and used for inside pulling. Any $\frac{1}{2}$ " opening wrench can be used on the screw's hex. head. Two two-way and two three-way puller sets are available. Parts included in these sets are shown in the right columns of the table below.

Puller Parts on Pages 46-51 are of special alloy steel.



4060A Two-Way Puller



4070C Three-Way Puller

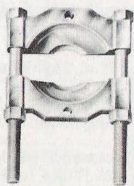
Light-Duty Puller Parts and Sets

NO.	DESCRIPTION	WT., LBS.	SET 4060A PARTS	SET 4060E PARTS	SET 4070C PARTS	SET 4070E PARTS
4022	Screw, $6\frac{3}{4}$ " Long, $\frac{1}{2}$ " Hex. Head, with 4022T & 4022TS Tips	.35	1	1	1	1
4022T	Standard Detachable Tip for 4022 Screw, 60° Taper	.03	----	----	----	----
4022TS	Small Detachable Tip for 4022 Screw, $\frac{1}{4}$ " Diameter	.02	----	----	----	----
4063	Knurled Non-Reversible Adjusting Nut, $1\frac{3}{4}$ " Diameter	.28	1	1	1	1
4056N	Knurled Reversible Adjusting Nut, $2\frac{1}{2}$ " Diameter	.75	----	----	----	----
4061	Yoke, $2\frac{1}{2}$ " Wide, for Holding Two Jaws	.23	1	1	----	----
4071	Yoke, $2\frac{1}{2}$ " Diameter, for Holding Three Jaws	.32	----	----	1	1
4056PN	Pin for Holding Jaw in Yoke, Held in Place by Ball Check	.03	2	2	3	3
4056J	Reversible Jaw, $3\frac{1}{2}$ " Long, 2" Yoke to Hook, $1\frac{5}{8}$ "- $4\frac{1}{8}$ " Inside Range, 0"- $2\frac{9}{16}$ " Outside Range	.11	2	2	----	----
4066	Outside Jaw, $4\frac{9}{16}$ " Long, 3" Yoke to Hook, 0"- $5\frac{3}{16}$ " Range	.21	2	----	3	----
4067	Long Outside Jaw, $7\frac{21}{32}$ " L., $6\frac{1}{8}$ " Yoke to Hook, 0"- $8\frac{3}{4}$ " Range	.30	----	2	----	3
Set Weight, Lbs.			1.75	1.93	1.94	2.21

Additional Jaws That Can Be Used with Light-Duty Pullers Are Listed on the Preceding Page.

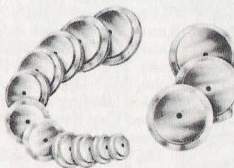
SEPARATOR-PULLER AND STEP PLATES

No. 4032 Bearing Separator and Puller Attachment



Flat surfaces and knife-like edges permit adjustment behind many gears, bearings, etc., where space is too limited for heavy puller hooks. Protects expensive bearings. Width, $5\frac{13}{16}$ ". Maximum opening, $4\frac{1}{2}$ ". Wt., 4.4 Lbs. Parts: Top Plate—4032A. Bottom Plate—4032B. Bolt and Nut—4032S.

Step Plate Adapters



Used on hollow shafting or housings as a base for a puller screw when forcing off bushings, gears, etc. Also useful for installing oil seals. Eleven sizes at left above comprise Set No. 4040.

NO.	SMALL DIAM.	LARGE DIAM.	WT., LBS.
4040-1	$\frac{3}{4}$ "	1"	.05
4040-2	$\frac{7}{8}$ "	$1\frac{1}{8}$ "	.08
4040-3	1"	$1\frac{1}{4}$ "	.10
4040-4	$1\frac{1}{8}$ "	$1\frac{3}{8}$ "	.13
4040-5	$1\frac{1}{4}$ "	$1\frac{5}{8}$ "	.19
4040-6	$1\frac{3}{8}$ "	$1\frac{3}{4}$ "	.22
4040-7	$1\frac{1}{2}$ "	$1\frac{7}{8}$ "	.28
4040-8	$1\frac{5}{8}$ "	2"	.33
4040-9	$1\frac{3}{4}$ "	$2\frac{1}{8}$ "	.40
4040-10	$1\frac{7}{8}$ "	$2\frac{3}{8}$ "	.49
4040-11	2"	$2\frac{1}{2}$ "	.59
4040-12	$2\frac{1}{8}$ "	$2\frac{5}{8}$ "	.65
4040-13	$2\frac{1}{4}$ "	$2\frac{3}{4}$ "	.76
4040-14	$2\frac{3}{8}$ "	$2\frac{7}{8}$ "	.83

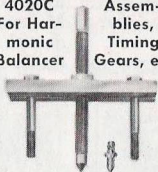
No. 4040 Set

Eleven Step Plates, 4040-1 to 4040-11. Wt., 3.0 Lbs.

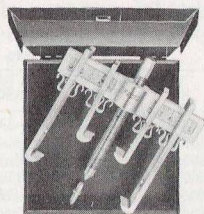
MEDIUM AND HEAVY-DUTY PULLERS

Provide straight line pulling for all types of bearings, sprockets, gears, pulleys, wheels, hubs, etc. Springs hold quick-change jaws securely on crossarm, which is marked to show the inches jaws are apart. With no linkage or pins to adjust, they are easy to set up. Five jaws have hole for bolting together and extending reach.

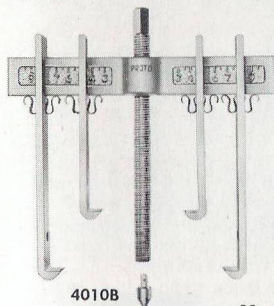
4020C
For Harmonic Balancer



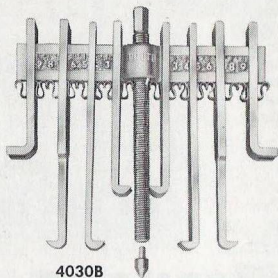
Assemblies, Timing Gears, etc.



4020A



4010B



4030B



4022T



4022TS

Standard Tip Small-Diam. Tip
Detachable "live center" screw tips do not rotate when a screw is turned, preventing shaft damage, keeping screw on center, relieving screw strain and retaining better alignment.

Medium-Duty Puller Parts and Sets

NO.	DESCRIPTION	WT. LBS.	PARTS IN SET 4020A	PARTS IN SET 4020B	PARTS IN SET 4020C
4021	Crossarm, 7" Long, with Jaw-Positioning Guide.....	1.00	1	1	----
4021S	Spring for Jaws 4025, 4026 and 4027.....	.01	----	----	----
4056C	Cap Screw Crossarm, 6" Wide.....	1.10	----	----	1
4022	Screw, 6 $\frac{3}{4}$ " Long, $\frac{1}{2}$ " Hex. Head, with 4022T & 4022TS Tips.....	.35	1	1	1
4022T	Standard Detachable Tip for 4022 Screw, 60° Taper.....	.03	----	----	----
4022TS	Small Detachable Tip for 4022 Screw, $\frac{1}{4}$ " Diameter.....	.02	----	----	----
†4025	Jaw, 2" from Crossarm to Hook.....	.33	2	2	----
†4026	Jaw, 4" from Crossarm to Hook.....	.50	2	2	----
4027	Narrow Jaw, 4" from Crossarm to Hook.....	.35	----	----	----
4028	Cap Screw, Case Hardened, 3" Long.....	.10	----	----	2
4029	Steel Box, 1 $\frac{1}{4}$ "x7"x7".....	1.74	1	----	----
Set Weight, Lbs.			5.0	3.2	1.76

Heavy-Duty Puller Parts and Sets

NO.	DESCRIPTION	WT. LBS.	PARTS IN SET 4010B	PARTS IN SET 4010C	PARTS IN SET 4030A	PARTS IN SET 4030B
4011	Crossarm, 11" Long, with Jaw-Positioning Guide.....	2.7	1	1	1	1
4011S	Spring for Jaws 4015, 4016, 4017 and 4018.....	.02	----	----	----	----
4012	Screw, 11 $\frac{1}{2}$ " Long, $\frac{5}{8}$ " Hexagon Head, with 4012T Tip.....	1.21	1	1	1	1
4012T	Standard Detachable Tip for 4012 Screw, 60° Taper.....	.06	----	----	----	----
†4015	Jaw, 4 $\frac{3}{4}$ " from Crossarm to Hook.....	.94	2	2	2	2
†4016	Jaw, 7 $\frac{3}{16}$ " from Crossarm to Hook.....	1.26	2	2	2	2
4017	Timing Gear Jaw, 7 $\frac{3}{16}$ " from Crossarm to Hook.....	1.14	----	----	2	2
†4018	Cap Screw Jaw, 3" from Crossarm to Hook.....	.88	----	2	2	2
4019	Steel Box, 1 $\frac{3}{4}$ "x11 $\frac{1}{8}$ "x11 $\frac{3}{4}$ ".....	4.1	----	----	1	----
Set Weight, Lbs.			8.5	7.7	17	13

†Has Extra Hole Near Hook for Bolting Jaws Together. Saves Buying Expensive Long-Reach Jaws.

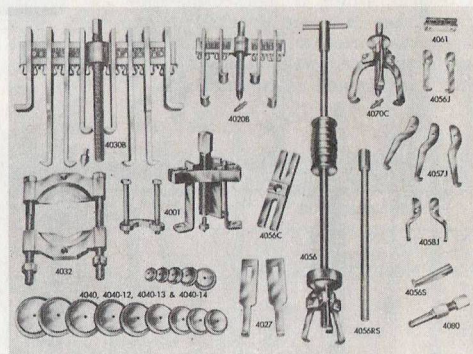
NO. 4000AB MASTER PULLER SET

Ideal for most types of vehicle and equipment repair shops and for

Contents

NO.	QUANTITY	DESCRIPTION
4030B	1	Heavy-Duty Puller
4020B	1	Medium-Duty Puller
4056	1	Slide-Hammer Puller
4070C	1	Light-Duty Puller
4056J	2	Reversible $3\frac{1}{2}$ " Jaw
4061	1	Yoke for Two Jaws
4001	1	Universal Wheel Puller
4032	1	Bearing Separator
4040	1	Step Plate Adapter Set
4040-12	1	Step Plate Adapter
4040-13	1	Step Plate Adapter
4040-14	1	Step Plate Adapter
4027	2	Narrow Jaw
4056C	1	Cap Screw Crossarm
4056RS	1	Short Puller Rod
4056S	1	Single Puller Jaw
4057J	3	Reversible $4\frac{5}{8}$ " Jaw
4058J	2	Pilot Bearing Jaw
4080	1	Blind Bearing Puller

maintenance departments in many industries. Makes an extremely large number of puller set-ups, due to parts interchangeability, and handles hundreds of pulling operations. Weight, 52 Lbs.

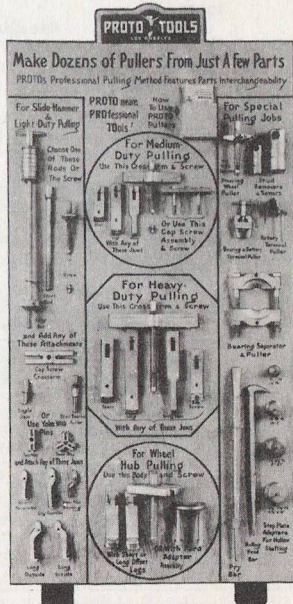


NO. SD6 "PULLERMART"

A master puller set with new type of storage rack for garages, other repair shops and industrial plants that use all types of pullers. Clearly labeled individual parts of basic sets are arranged on the rack in "exploded" fashion and are located in proper order for assembly. With this system, the interchangeable parts can be used in a great many set-ups, eliminating the need for a large number of costly special pullers. Five sections enclose 59 parts for four basic pullers, plus a group of 22 useful pulling tools. Outlines and numbers facilitate replacement of tools after use. The $3' \times 5\frac{1}{2}'$ rack of $\frac{5}{8}"$ plywood has an easel back. Weight, 119 Lbs.

Contents

NO.	QU.	DESCRIPTION	NO.	QU.	DESCRIPTION
2124	1	Utility Pry Bar	4056	1	Slide-Hamr. Puller
2130	1	Rolling Head Bar	4056C	2	Slotted Crossarm
4001	1	Wheel Puller Set	4056L	3	Long Inside Jaw
4001JT	3	Wheel Puller Leg	4056RS	1	Short Rod
4020B	1	Medium Puller Set	4056S	1	Single Jaw Puller
4022	1	Med. Puller Screw	4057J	3	Long Revers. Jaw
4027	2	Narrow Jaw	4058J	2	Pilot Bearing Jaw
4028	2	Cap Screw	4061	1	Two-Way Yoke
4030B	1	Heavy Puller Set	4063	1	Adjusting Nut
4032	1	Bearing Separator	4066	3	Long Outside Jaw
4040-1-14	1	14 Step Plates	4080	1	Blind Brg. Puller
4041	1	Small Utility Puller	4515	1	Stud Remover
4042	1	Bat. Term. Puller	4532	1	Stud Remover
4043	1	Strg. Wheel Puller	-----	1	Storage Rack



SPECIAL-PURPOSE PULLERS

Stud Removers and Setters

For Power Type, see Page 24.



4515 & 4532

Military Specs.: GGG-S-571, Type IV, Style A.

Wedge type removers and setters are far superior to the eccentric roller type. They give long service, handle very short studs ($\frac{3}{4}$ " for the No. 4515), and have a small turning radius which clears many obstructions that would block operation of other types. The tapered, deeply-serrated wedges grip tighter as pressure is applied and take a firm hold on stubborn studs. Each unit has two wedges to increase the usable range. A spring-tensioned pin holds the wedges in the body when not in use. No. 4515 is $1\frac{1}{16}$ " in diameter and $3\frac{1}{2}$ " long. No. 4532 is 2" in diameter and $5\frac{1}{8}$ " long.

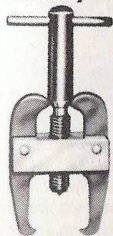
STANDARD $\frac{1}{2}$ " SQUARE DRIVE

NO.	DESCRIPTION	FOR STUDS	WT., LBS.
4515	Stud Remover	$1\frac{1}{4}$ "- $5\frac{3}{8}$ "	.78
4516	Thick Wedge Only	$1\frac{1}{4}$ "- $1\frac{1}{16}$ "	.07
4517	Thin Wedge Only	$1\frac{1}{2}$ "- $5\frac{3}{8}$ "	.04

HEAVY-DUTY $\frac{3}{4}$ " SQUARE DRIVE

4532	Stud Remover	$5\frac{5}{8}$ "-1"	3.4
4533	Thick Wedge Only	$5\frac{5}{8}$ "- $3\frac{3}{4}$ "	.34
4534	Thin Wedge Only	$3\frac{3}{4}$ "-1"	.18

Battery Terminal and Bearing Pullers



4041
Wt., .65 Lb.

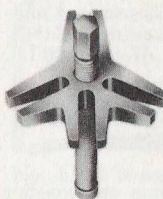
Remove terminals quickly and easily, without damaging posts. No. 4041, a conventional type, can be used for small bearings and other jobs. No. 4042, an unusual type, costs less and is faster to set up and use.



4042
Wt., .44 Lb.

All puller parts listed on Pages 46-51 are made from special alloy steel.

No. 4043 Steering Wheel Puller



Designed to remove drilled and tapped steering wheels, but ideal for many other cap screw pulling jobs. Holds two diametrically opposed cap screws, or three screws spaced 120° apart. Rotatable screw

tip is cut away to prevent interference with horn button wiring. Weight, 1.20 Lbs. Parts: Body—4043B. Screw with Tip—4043S. Tip Only—4043T.

No. 4080 Blind Bearing Puller



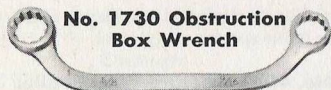
A simple, efficient collet-type puller for pulling Chevrolet, Ford and Packard pilot bearings quickly and without damage. Turning the screw expands outer shoulder and grips bearing. Has an exceptional range of expansion and therefore has many uses. Can be used alone or with a No. 4056 slide-hammer puller. Length, $4\frac{1}{2}$ ". Weight, .34 Lb. Parts: Body—4080B. Screw—4080S.



No. 4082 Wheel Bolt Inserter and Peener

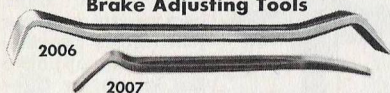
For installing new wheel attaching bolts in rear axle flanges of Chevrolets. With this tool you can replace a bolt in $\frac{1}{6}$ th the usual time because it makes removal of rear axle and other parts unnecessary. Screwing tool onto a new bolt with countersunk end toward flange pulls bolt tightly into position. Eccentric end peens shoulder of bolt into space provided on flange. Length, $1\frac{3}{8}$ ". Weight, .17 Lb.

SPECIAL-PURPOSE TOOLS



No. 1730 Obstruction Box Wrench

Useful on many starters. Clearance at middle, 1". Box openings, 12-point, $\frac{9}{16}$ "x $\frac{5}{8}$ ". Length, $6\frac{1}{32}$ ". Alloy steel. Weight, .20 Lb.



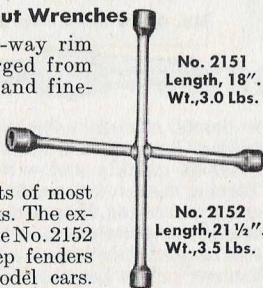
Brake Adjusting Tools

No. 2006 adjusts star nuts on two-shoe Bendix brakes. It is $8\frac{1}{2}$ " long, has $1\frac{5}{8}$ " spoons and weighs .30 Lb. No. 2007 is for Chevrolet brakes and other close places. It is $6\frac{5}{16}$ " long, has $1\frac{3}{16}$ " and $1\frac{1}{16}$ " spoons and weighs .18 Lb. Both are alloy steel.

Wheel Lug Nut Wrenches

Speedy, four-way rim wrenches, forged from special steel and finely balanced.

Hex. openings of $\frac{5}{8}$ ", $\frac{3}{4}$ ", $\frac{13}{16}$ " & $\frac{7}{8}$ " fit lug nuts of most cars and trucks. The extra length of the No. 2152 clears the deep fenders of all late model cars.



No. 2151
Length, 18".
Wt., 3.0 Lbs.

No. 2152
Length, 21 $\frac{1}{2}$ ".
Wt., 3.5 Lbs.

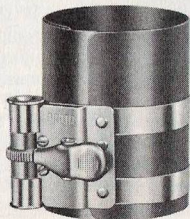
No. 2301 Muffler Removal Tool



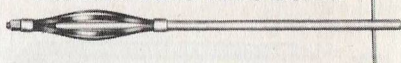
Makes quick work of taking off worn-out, hard-to-reach mufflers and tailpipes. Alloy steel. Length, $6\frac{1}{8}$ ". Weight, .29 Lb.

No. 2316 Piston Ring Compressor

Band-operating ratchet prevents breakage and slippage. Wide band ($3\frac{1}{2}$ "") has $2\frac{3}{16}$ " to 5" range. Ell handle included. Weight, .85 Lb.

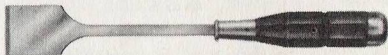


No. 2335 Valve Guide Cleaner



Turning a nut adjusts the five flexible blades to any valve guide size. Length, $9\frac{3}{4}$ ". Weight, .10 Lb. Extra blade—2335B.

No. 2336 Gasket Scraper



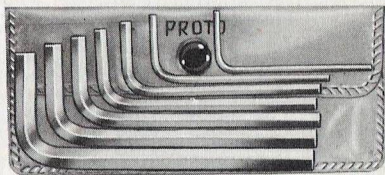
For removing shellacked gaskets, scraping carbon and many other uses. Length, $11\frac{1}{32}$ ". Blade width, $1\frac{1}{2}$ ". Weight, .39 Lb.

No. 2337 Flexible Carbon Scraper



Sliding band regulates the flexibility of the ten round spring steel blades. Length, 9". Width, 1". Weight, .30 Lb.

No. 4977 Allen-Type Wrench Set

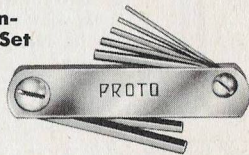


Handy 2"x $4\frac{1}{2}$ " plastic case, containing seven plated L-type hexagon keys for turning Allen head, socket head and hollow head screws. Sizes— $\frac{5}{64}$ " (fits No. 8 set screws), $\frac{3}{32}$ " (No. 10), $\frac{1}{8}$ " ($\frac{1}{4}$ "), $\frac{5}{32}$ " ($\frac{3}{16}$ "), $\frac{3}{16}$ " ($\frac{3}{8}$ "), $\frac{7}{32}$ " ($\frac{1}{2}$ "") and $\frac{1}{4}$ " ($\frac{1}{2}$ ""). Weight, .21 Lb.

No. 4978 Allen-Type Wrench Set

Pocket-knife type 3" metal case, with seven hex keys for Allen head,

socket head and hollow head screws. Sizes—.050 (fits No. 4 set screws), $\frac{1}{16}$ " (Nos. 5 and 6), $\frac{5}{64}$ " (No. 8), $\frac{3}{32}$ " (No. 10), $\frac{1}{8}$ " ($\frac{1}{4}$ ""), $\frac{5}{32}$ " ($\frac{3}{16}$ "") and $\frac{3}{16}$ " ($\frac{3}{8}$ ""). Weight, .16 Lb.



SPECIAL-PURPOSE TOOLS



No. 5026HP Spark Plug Socket

Thin-wall socket with hexagon $\frac{13}{16}$ " opening for 14-mm. spark plugs that are recessed, as in Buick, Nash and other cars. Drive, $\frac{3}{8}$ ". Length, $2\frac{5}{16}$ ". Weight, .21 Lb.



Heavy-Duty Screwdriver Sockets

For drag links and screw adjustments on steering assemblies, shock absorbers, starters, etc.

NO.	DRIVE	BIT SIZE	LGTH.	LBS.
5244	$\frac{3}{8}$ "	$\frac{5}{8}$ "x.116"	$1\frac{1}{4}$ "	.08
5444	$\frac{1}{2}$ "	$\frac{3}{4}$ "x.115"	$1\frac{9}{16}$ "	.14
5446	$\frac{1}{2}$ "	$1\frac{1}{16}$ "x.154"	$1\frac{9}{16}$ "	.20



Connecting Rod Sockets

Thin nose, hexagon, $\frac{1}{2}$ " drive sockets. No. 6523 is for Ford V8 con. rod nuts. No. 6522 is for La Salles and Cadillacs.



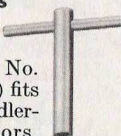
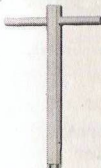
6522

6523

NO.	OPENG.	LGTH.	WT., LB.
6522	$\frac{7}{16}$ "	$1\frac{5}{8}$ "	.13
6523	$\frac{9}{16}$ "	$1\frac{3}{4}$ "	.11

Carburetor Jet Wrenches

Turn jets quickly, without damaging soft jet material. No. 6526 (Wt., .07 Lb.) fits Holley and Chandler-Groves carburetors. No. 6528 (Wt., .06 Lb.) fits nearly all Stromberg carburetors.



6526



6528



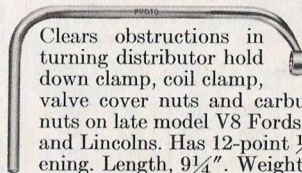
No. 6535 Distributor Socket

For changing late Chevrolet distributor points. Two prongs turn housing terminal screw nut. Drive, $\frac{1}{4}$ ". Length, $1\frac{1}{16}$ ". Weight, .02 Lb. Card with 12 Sockets—6535A.

No. 6539 Ford V8-85 Valve Lifter

Long leverage breaks loose the toughest guides. Push guide down to remove keeper, and then pry to force out the guide. Stock, $\frac{3}{4}$ ". Length, 30". Weight, 3.5 Lbs.

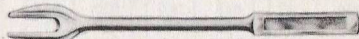
The screwdriver of Valve Adjuster No. 6734 and all other tools on this page are made from PROTO-specified alloy steels.



No. 6540 Distributor Wrench

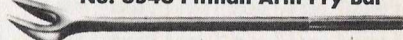
Clears obstructions in turning distributor hold down clamp, coil clamp, valve cover nuts and carburetor base nuts on late model V8 Fords, Mercurys and Lincolns. Has 12-point $\frac{1}{2}$ " box opening. Length, $9\frac{1}{4}$ ". Weight, .41 Lb.

No. 6545 Drag Link & Shock Arm Tool

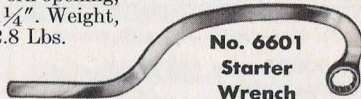


Slim, tapered fork is readily inserted to separate shock links and tie rods. Length, 16". Fork opening, $2\frac{1}{32}$ ". Weight, 2.3 Lb.

No. 6546 Pitman Arm Pry Bar



Eliminates need for expensive pullers to remove Pitman arms. Useful also for pulling gears, bearings and pulleys, and lifting blocks and heavy assemblies. Length, 20". Fork opening, $1\frac{1}{4}$ ". Weight, 2.8 Lbs.



No. 6601 Starter Wrench

For Plymouth, Dodge, DeSoto and Chrysler cars. Clears objects when removing or replacing starter. Has $\frac{5}{8}$ " box opening. Length, $9\frac{3}{4}$ ". Weight, .35 Lb.



No. 6734 Valve Adjuster

For accuracy, speed and ease when adjusting overhead valves. Using a $\frac{1}{2}$ " drive socket wrench, first loosen lock nut. Then operate screwdriver for adjustment, setting valve clearance with feeler gauges. Also used with clutch adjusting machines. Weight, .33 Lb. Extra Screwdriver Blade with Knob—6734S. Extra Socket-Holding Spring with Screw—6734H.

FEELER GAUGES AND GAUGE SETS

Military Specs.: GGG-G-21 Standard Feeler Gauges

Accurately ground and correctly heat treated to remain true after long use.

Short Blades $\frac{1}{2}$ " Wide, $3\frac{1}{16}$ " Long

NO.†	WT., LB.	NO.†	WT., LB.	NO.†	WT., LB.
0015	.001	010	.005	018	.009
002	.001	011	.005	019	.009
003	.002	012	.005	020	.010
004	.002	013	.006	022	.011
005	.003	014	.006	025	.012
006	.003	015	.007	030	.013
007	.004	016	.008	032	.015
008	.004	017	.008	035	.016
009	.004			040	.018

Long Blades $\frac{1}{2}$ " Wide, 12" Long

NO.†	WT., LB.	NO.†	WT., LB.	NO.†	WT., LB.
0015L	.002	012L	.021	021L	.035
002L	.004	013L	.023	022L	.036
003L	.006	014L	.023	025L	.040
004L	.008	015L	.027	027L	.043
005L	.009	016L	.027	028L	.046
006L	.012	017L	.028	030L	.050
008L	.016	018L	.030	032L	.054
010L	.019	019L	.031	035L	.057
011L	.019	020L	.032	040L	.070

†No. Indicates Thickness in Thousandths of Inch (Ex. 0015 & 0015L—in Ten Thousandths).

No. 000C Feeler Gauge Holder

For $3\frac{1}{16}$ " feeler gauge blades. Holds all available sizes. Weight, .05 Lb.

Step-Cut Feeler Gauges

"Go and no-go" type, each blade having two different thicknesses. Width, $\frac{1}{2}$ ". Length, $3\frac{1}{4}$ ".

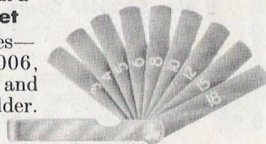
NO.†	WT., LB.
004/6	.002
005/7	.003
006/8	.003
007/9	.004
008/10	.004
009/11	.004
010/12	.006
011/13	.006
012/14	.006

NO.†	WT., LB.
013/15	.007
014/16	.007
015/17	.008
016/18	.008
017/19	.009
018/20	.009
019/21	.010
020/22	.010

†No. Indicates Both Thicknesses in Thousandths of an Inch.

No. 000A Standard Feeler Gauge Set

Nine short blades—003, 004, 005, 006, 008, 010, 012, 015 and 018—in 000C holder. Wt., .10 Lb.



No. 000AA Standard Feeler Gauge Set

Master set, with 25 short blades—0015 through 040, except 019—in 000C holder. Wt., .19 Lb.

No. 000B Step-Cut Gauge Set

Four gauges—004/6, 006/8, 008/10 and 010/12—in 000C holder. Wt., .06 Lb.



No. 000BB Step-Cut Gauge Set

Master set, with eight gauges—004/6 through 011/13—in 000C holder. Wt., .08 Lb.

Ten $\frac{3}{16}$ " wide by $1\frac{1}{2}$ " long blades—

.013", .015", .017", .018", .020", .025", .030", .032", .035" and .040" thick—in holder. Wt., .03 Lb.

No. 000D Ignition Gauge Set



Blades not sold separately.

No. 000E Brake Gauge Set

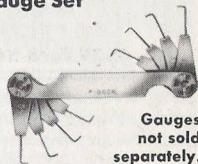
Nine $\frac{3}{16}$ " wide by 4" long blades—.006", .008", .010", .012", .014", .016", .018", .020" and .025" thick—in holder. Wt., .04 Lb.

Blades not sold separately.



No. 000K Spark Plug Gauge Set

For checking spark plug gaps. Eight bent-wire gauges—.022", .025", .027", .028", .030", .032", .035" and .040" thick—in holder. Wt., .06 Lb.



Gauges not sold separately.

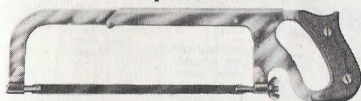
HACKSAWS, BARS AND BENDING TOOL

No. 344 Low-Clearance Hacksaw



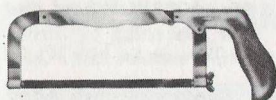
All metal. For use where high frame won't work. Takes 10" blades. Weight, .88 Lb.

No. 352 Adjustable Hacksaw



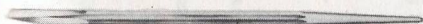
A heavy-duty polished and plated frame with many fine features. Pistol-grip handle, of durable red plastic, is at an angle and shaped to fit the hand. Takes 8", 10" or 12" blades, which can be set in four different positions. Weight, 1.62 Lbs.

No. 360 Adjustable Hacksaw



Inexpensive, but sturdy and serviceable. Pistol grip handle. Weight, 1.20 Lbs.

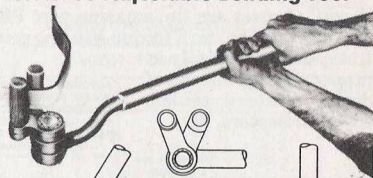
Conventional-Type Pry Bars



For countless prying and aligning jobs. Forged from special alloy steel and correctly heat treated for extra strength.

NO.	STOCK	LENGTH	WT., LBS.
2116	1/2" Hexagon	16"	.72
2120	19/32" Hexagon	18"	1.20
2124	23/32" Hexagon	24"	2.4

No. 2135 Adjustable Bending Tool

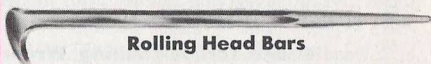


Arms far apart.
Handle at angle.

Arms close
together.

Arms far apart.
Handle upright.

Adjustable to over 100 positions, this efficient bending bar has many uses. It is ideal for bending and aligning bumper brackets, frame horns, pillars, rods, front ends and steering parts; for aligning parts, spreading springs, straightening steering arms and tie rods, and lifting heavy assemblies, and for holding, aligning and shaping of tool bar standards, brackets, and harrow and cultivator frames. Length, 36". Weight, 14 Lbs. Parts: Body Only — 2135B. Handle — 2135H. Lower Arm — 2135L. Upper Arm — 2135S. Body and arms are of alloy steel.



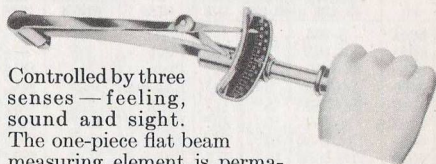
Rolling Head Bars

New type gear bar, with 90° rolling head. One of the handiest types of bars you can own, having a great many uses. Especially valuable for getting into close places, such as behind gears. Forged from alloy steel.

NO.	STOCK	LENGTH	WT., LBS.
2126	1/2" Hexagon	16"	.86
2130	19/32" Hexagon	18"	1.62

REFLEX-TYPE TORQUE WRENCHES

NO.	CAPACITY	GRADUATIONS	SQ. DRIVE	LENGTH	WT., LBS.
	FT.-LBS.	FT.-LBS.			
6025	0-25	1	3/8"	16"	2.6
6050	0-50	2 1/2	1/2"	16"	2.7
6100	0-100	5	1/2"	17 1/2"	2.9
6150	0-150	5	1/2"	20 1/2"	3.6
	IN.-LBS.	IN.-LBS.			
61800	0-1800	100	1 1/2"	20 1/2"	3.6
62400	0-2400	50	3/4"	28 1/2"	7.6

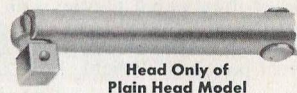
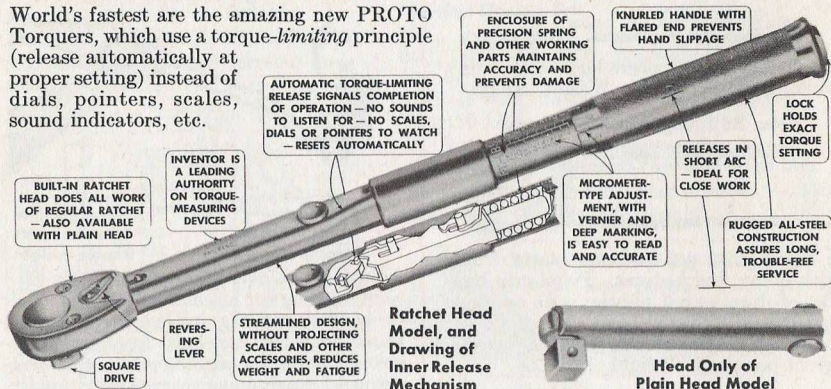


Controlled by three senses — feeling, sound and sight. The one-piece flat beam measuring element is permanently accurate and practically indestructible.

TORQUE-LIMITING WRENCHES

Military Specs.: MIL-H-4034A (USAF)

World's fastest are the amazing new PROTO Torquers, which use a torque-limiting principle (release automatically at proper setting) instead of dials, pointers, scales, sound indicators, etc.



PROTO Torquers are super-fast, accurate, versatile, easy to use, safe, and rugged. Desired torque is set by turning the handle like a micrometer. When the right torque is reached by pulling the handle, the wrench releases and signals the user with a positive reflex action. It resets automatically upon removal of pressure. Time and money-saving ratchet head models do the work of both a ratchet and torque wrench.

Foot-Pound Torque-Limiting Wrenches

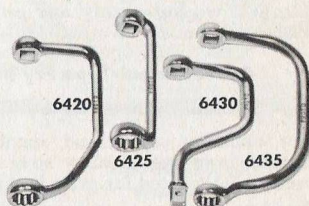
NO.	CAPACITY, FT.-LBS.	GRADUATIONS, FT.-LBS.	SQ. DRIVE SIZE	STYLE OF HEAD	MAXIMUM DRIVE END WIDTH	OVER-ALL LGTH.	WT., LBS.
6005	5-75	1/2	3/8"	Plain	15 1/16"	13 1/4"	1.34
6006	5-75	1/2	3/8"	Ratchet	13 7/8"	14 1/16"	1.54
6007	5-75	1/2	1/2"	Plain	15 1/16"	13 1/4"	1.34
6008	5-75	1/2	1/2"	Ratchet	13 7/8"	14 1/16"	1.54
6015	10-150	1	1/2"	Plain	1 1/16"	17 1/4"	2.0
6016	10-150	1	1/2"	Ratchet	1 3/4"	18 3/4"	2.5
6017	100-500	5	3/4"	Plain	2"	37"	8.8

Inch-Pound Torque-Limiting Wrenches

NO.	CAPACITY, IN.-LBS.	GRADUATIONS, IN.-LBS.	SQ. DRIVE SIZE	STYLE OF HEAD	MAXIMUM DRIVE END WIDTH	OVER-ALL LGTH.	WT., LBS.
6061	5-165	2	1/4"	Plain	7 7/8"	8 1/2"	.85
6063	5-165	2	3/8"	Plain	7 7/8"	8 1/2"	.85
6065	100-750	5	3/8"	Plain	15 1/16"	13 1/4"	1.28
6066	100-750	5	3/8"	Ratchet	13 7/8"	14 1/16"	1.50
6067	100-750	5	1/2"	Plain	15 1/16"	13 1/4"	1.32
6068	100-750	5	1/2"	Ratchet	13 7/8"	14 1/16"	1.52
6069	700-1600	10	1/2"	Plain	1 1/16"	17 1/4"	2.0
6070	700-1600	10	1/2"	Ratchet	1 3/4"	18 3/4"	2.5
6071	1000-5000	50	3/4"	Plain	2"	37"	8.8

No. 6008W Wheel and Plug
For converting 3/8" drive ratchet Torquer to 1/2". Wt., .11 Lb.

Torque Wrench Adapters



Clear overhead valve engine obstructions in torquing head bolts. All 1/2" drive. Following are uses: 6420—All Chevrolets. 6425—All Chevrolet cars & trucks, 1935-52 Series 60, 70, 80 & 90 & 1941-52 Series 40 & 50 Buicks. 6430—Power-Glide Chevrolets & general uses. 6435—Fords, Mercurys, Studebakers & Pontiacs.

NO.	DESCRIPTION	LGTH.	LB.
6420	3/4", 12-Pt. Box Opening, Wide Sweep	6 19/32"	.61
6425	3/4", 12-Pt. Box Opening, Close Sweep	5 17/32"	.43
6430	1/2" Sq. Male Plug	5 1/2"	.50
6435	1 1/16", 12-Pt. Box Opg.	7 5/16"	.63

NUPLAFLEX PLASTIC-TIP HAMMERS

Military Specs.: MIL-H-16169,
Type XI, Class E.

Underwriters' Laboratories Approved

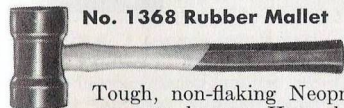
Over 1,000 Uses

Complete Nuplaflex Hammers

WITH TOUGH GRADE TIPS				
NO.	HEAD DIAM.	HEAD LENGTH	HANDLE LENGTH	WT., LBS.
1388	1"	3 1/2"	11 3/8"	.32
1389	1"	3 1/2"	11 3/8"	.43
1390	1 1/2"	4 3/8"	13 1/2"	.64
1391	1 1/2"	4 3/8"	13 1/2"	1.00
1392	2"	4 1/2"	14"	1.13
1393	2"	4 1/2"	14"	1.82
1394	2 1/2"	5 1/4"	15"	2.0
1395	2 1/2"	5 1/4"	18"	3.3
1396	3"	6 1/4"	18"	3.1
1397	3"	6 1/4"	18"	5.3
WITH SOFT GRADE TIPS				
1398	1 1/2"	4 3/8"	13 1/2"	.66
1399	2"	4 1/2"	14"	1.10

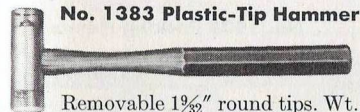
Perfect for use on threads, soft metal, fenders, tires, leather, furs, and painted, polished or plated surfaces that would be scratched, marred or otherwise damaged by a metal hammer. Nuplaflex hammers offer many advantages over rawhide, brass, lead and other plastic types. The revolutionary plastic used recovers shape when dented or cut, doesn't flake off, lasts many times longer than most other types, is non-sparking (also heads) and positively safe around explosive fumes, won't burn readily unless held in flame, is oil and grease resistant, absorbs sting-causing vibration, and has minimum rebound, speeding work.

SOFT-FACE HAMMERS



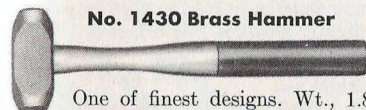
No. 1368 Rubber Mallet

Tough, non-flaking Neoprene head prevents damage. Hour-glass design has 2 5/8" faces. Length, 15". Wt., 1.46 Lbs.



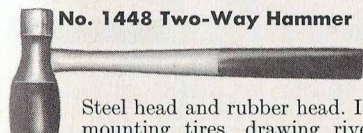
No. 1383 Plastic-Tip Hammer

Removable 1 3/32" round tips. Wt., .76 Lb. 1370C—Extra Tip. Wt., .06 Lb.



No. 1430 Brass Hammer

One of finest designs. Wt., 1.84 Lbs.



No. 1448 Two-Way Hammer

Steel head and rubber head. Ideal for mounting tires, drawing rivets and many other jobs. Length, 17". Wt., 2.6 Lbs. 1448B—Extra Rubber Head. Wt., .28 Lb.

Nuplaflex Tips Only

Three grades. For replacement and making all-purpose hammers with two types of tips.

TOUGH GRADE NO.	MEDIUM GRADE NO.	SOFT GRADE NO.	HEAD DIAM.	WT., LB.
1388T	1388M	1388S	1"	.04
1390T	1390M	1390S	1 1/2"	.10
1392T	1392M	1392S	2"	.23
1394T	1394M	1394S	2 1/2"	.39
1396T	1396M	1396S	3"	.60

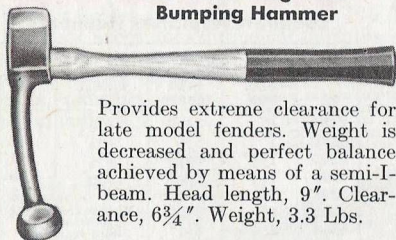
HAMMER HANDLES

Distinctive octagon shape gives a sure, comfortable grip. Made of tough, second growth, straight-grained hickory.

NO.	FOR HAMMERS	EYE SIZE	LGTH.	WT., LB.
1370H	1375	1 1/2" Diam.	12 1/4"	.23
1388H	1388 & 1389	1 1/32" x 9/16"	11 3/8"	.14
1390H	1390, 1391 & 1398	1 1/2" x 3/4"	13 1/2"	.22
1392H	1392, 1393 & 1399	1 1/2" x 3/4"	14"	.28
1394H	1394	3/4" x 1 1/16"	15"	.41
1396H	1395, 1396 & 1397	3/4" x 1 1/8"	18"	.54
1416H	1416 & 1448	5/8" x 1"	17 3/8"	.48
1419H	1383 & 1419	1 1/32" x 1 1/16"	11 1/8"	.15
1424H	1424 & 1427	1 1/32" x 1 1/16"	13 1/8"	.18
1426H	1421, 1425, 1426 & 1428	1 3/32" x 1 3/16"	13"	.22
1429H	1429	3/8" x 1 1/16"	17 3/8"	.30
1430H	1368 & 1430	7/16" x 7/8"	16 1/8"	.39

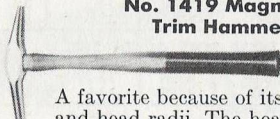
BODY AND FENDER HAMMERS

**No. 1416 Long Head
Bumping Hammer**



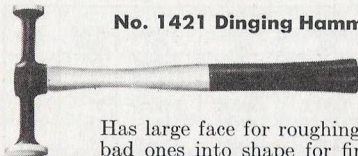
Provides extreme clearance for late model fenders. Weight is decreased and perfect balance achieved by means of a semi-I-beam. Head length, 9". Clearance, $6\frac{3}{4}$ ". Weight, 3.3 Lbs.

**No. 1419 Magnetic
Trim Hammer**



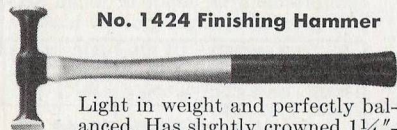
A favorite because of its long reach and head radii. The head is curved in the arc of a natural swing. Length of head, $5\frac{1}{2}$ ". Weight, .55 Lb.

No. 1421 Dinging Hammer



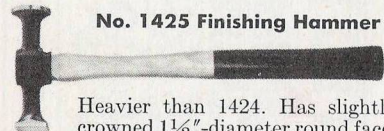
Has large face for roughing the bad ones into shape for finishing. Head is 6" long, with $1\frac{1}{4}$ " and $1\frac{5}{8}$ " round faces. Faces are slightly crowned. Weight, 1.00 Lb.

No. 1424 Finishing Hammer



Light in weight and perfectly balanced. Has slightly crowned $1\frac{1}{4}$ "-diameter round face, and a $1\frac{1}{16}$ " square face. Weight, .64 Lb.

No. 1425 Finishing Hammer

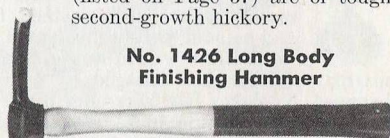


Heavier than 1424. Has slightly crowned $1\frac{1}{2}$ "-diameter round face, and a $1\frac{1}{8}$ " square face. Weight, .90 Lb.

Military Specs.: GGG-H-86.

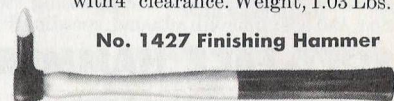
These hammers are forged from special alloy steel and are designed to speed and simplify repairs. They have good balance, and proper weight and clearances. Handles (listed on Page 57) are of tough second-growth hickory.

**No. 1426 Long Body
Finishing Hammer**



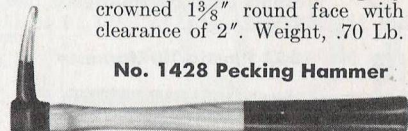
For crowned fenders and other places where clearance is needed. Has slightly crowned $1\frac{3}{8}$ "-diameter round face with $3\frac{1}{2}$ " clearance, and a round cross pein, $1\frac{1}{8}$ " wide, with 4" clearance. Weight, 1.03 Lbs.

No. 1427 Finishing Hammer



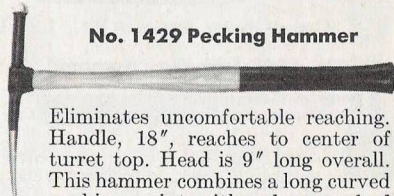
Has wedge shaped 1"-wide cross pein with $2\frac{1}{2}$ " clearance. Used for fender beads, corner along panel beading, etc. Has slightly crowned $1\frac{3}{8}$ " round face with clearance of 2". Weight, .70 Lb.

No. 1428 Pecking Hammer



Has pointed end for picking out small dents and a round face for finishing. Head is $5\frac{7}{8}$ " long overall. Slightly crowned round face is $1\frac{1}{2}$ " in diameter. Weight, .86 Lb.

No. 1429 Pecking Hammer



Eliminates uncomfortable reaching. Handle, 18", reaches to center of turret top. Head is 9" long overall. This hammer combines a long curved pecking point with a long-necked round pein. Weight, .88 Lb.

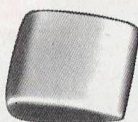
BODY AND FENDER TOOLS



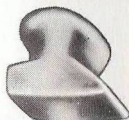
1452



1454



1457



1453



1455



1458

All Dollies Are Forged of Alloy Steel, Hardened and Tempered, and Polished on Working Surfaces. They Maintain Smooth Surfaces Over Long Periods.

No. 1454 Radius Dolly

Useful design, with many radii. One side and bottom are flat for dinging flat surfaces. Both ends high crowned. Size, $1\frac{1}{32}$ " x $2\frac{3}{16}$ " x $4\frac{1}{2}$ ". Weight, 2.9 Lbs.

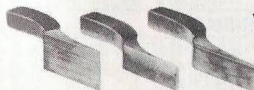
No. 1455 Bead Dolly

Another popular dolly, used for beads or flanges on fenders. Flat side works under long curve of fender. Thin edge is useful for corners and beading. Size, $1\frac{1}{8}$ " x $2\frac{3}{32}$ " x $4\frac{1}{16}$ ". Weight, 2.4 Lbs.

No. 1526 Panel Cutting Chisel



A rugged alloy steel ripping chisel that eliminates replacement of delicate cutters. Length, 11". Weight, 1.12 Lbs.



1411

1412

1413

Wood Paddles for Making Solder Fills

Treated for smooth flow.

NO.	WORKING AREA	LENGTH	WT., LB.
1411	Flat, $1\frac{1}{16}$ " x $3\frac{1}{4}$ "	$7\frac{3}{4}$ "	.11.
1412	Curved, $1\frac{1}{16}$ " x $3\frac{1}{4}$ "	$7\frac{3}{4}$ "	.09
1413	Flat, $1\frac{1}{8}$ " x $3\frac{1}{4}$ "	$7\frac{3}{4}$ "	.09

No. 1400SP Solder Paddle Set

Three paddles listed above. Wt., .40 Lb.

Dolly Blocks

No. 1452 Egg-Shaped Dolly

A very useful and popular shape, with a great many different curves and angles. Size, $1\frac{5}{8}$ " x $2\frac{1}{2}$ " x $3\frac{3}{4}$ ". Weight, 3.1 Lbs.

No. 1453 Railroad or General Purpose Dolly

Has a large variety of radii, perfect hand fit, thin beading edge, and $7\frac{1}{2}$ square inches on largest face. Heavy weight is ideal for bumping out dents. Size, $2\frac{3}{8}$ " x $2\frac{3}{4}$ " x $2\frac{3}{32}$ ". Weight, 2.9 Lbs.

No. 1457 Shrinking Dolly

The unique shape and low crown make this dolly ideal for shrinking body metal, and for raising beads and molding. Size, $1\frac{1}{4}$ " x $3\frac{1}{16}$ " x $3\frac{3}{16}$ ". Weight, 2.2 Lbs.

No. 1458 Semi-Elliptical Heel Dolly

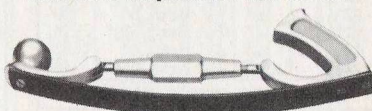
Provides two flat and two crowned working surfaces. Very useful in restricted places. Suitable for shrinking metal. Size, $1\frac{1}{16}$ " x $2\frac{3}{8}$ " x $3\frac{1}{4}$ ". Weight, 2.2 Lbs.

No. 1501 Flexible Flat Straight File



Fast cutting type for all kinds of body, fender and sheet metal work. Has curved teeth on both sides. Length, 14". Width, $1\frac{3}{8}$ ". Weight, .70 Lb.

No. 1509 Adjustable File Holder



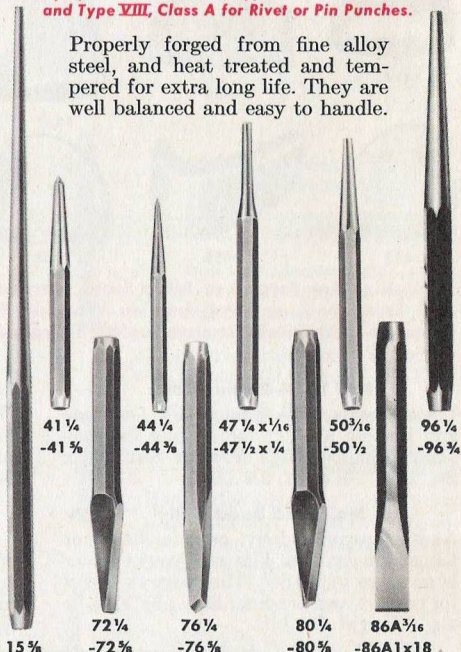
Made of aluminum, this fender file holder is light but strong. Simple adjustment makes file convex, concave or flat. Length, 16". Weight, 1.86 Lbs.

PUNCHES AND CHISELS

Military Specs.: GGG-P-831, Type II for Center Punches, and Type VIII, Class A for Rivet or Pin Punches.

Properly forged from fine alloy steel, and heat treated and tempered for extra long life. They are well balanced and easy to handle.

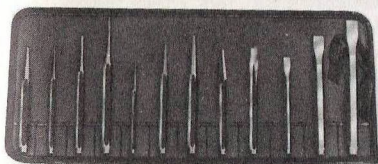
ALIGNING PUNCH				
NO.	POINT	STOCK	LGTH.	WT., LBS.
15 $\frac{5}{8}$	3 $\frac{1}{16}$ "	19 $\frac{1}{32}$ " Hex.	16"	.98
CENTER PUNCHES				
41 $\frac{1}{4}$	----	1 $\frac{1}{4}$ " Hex.	4 $\frac{1}{4}$ "	.05
41 $\frac{5}{16}$	----	5 $\frac{1}{16}$ " Hex.	4 $\frac{3}{8}$ "	.09
41 $\frac{3}{8}$	----	3 $\frac{3}{8}$ " Hex.	4 $\frac{7}{8}$ "	.13
41 $\frac{7}{16}$	----	1 $\frac{1}{16}$ " Hex.	5 $\frac{1}{4}$ "	.19
41 $\frac{1}{2}$	----	1 $\frac{1}{2}$ " Hex.	5 $\frac{5}{8}$ "	.26
41 $\frac{5}{8}$	----	19 $\frac{1}{32}$ " Hex.	6 $\frac{3}{16}$ "	.44
PRICK PUNCHES				
44 $\frac{1}{4}$	----	1 $\frac{1}{4}$ " Hex.	4 $\frac{3}{4}$ "	.05
44 $\frac{5}{16}$	----	5 $\frac{1}{16}$ " Hex.	5"	.09
44 $\frac{3}{8}$	----	3 $\frac{3}{8}$ " Hex.	5 $\frac{1}{4}$ "	.13
RIVET OR PIN PUNCHES				
47 $\frac{1}{4}$ x1 $\frac{1}{16}$	1 $\frac{1}{16}$ "	1 $\frac{1}{4}$ " Hex.	4 $\frac{3}{8}$ "	.05
47 $\frac{1}{4}$ x3 $\frac{3}{32}$	3 $\frac{3}{32}$ "	1 $\frac{1}{4}$ " Hex.	4 $\frac{3}{4}$ "	.05
47 $\frac{5}{16}$ x1 $\frac{1}{8}$	1 $\frac{1}{8}$ "	5 $\frac{1}{16}$ " Hex.	5 $\frac{1}{4}$ "	.09
47 $\frac{5}{16}$ x3 $\frac{3}{32}$	3 $\frac{3}{32}$ "	3 $\frac{1}{16}$ " Hex.	5 $\frac{5}{8}$ "	.10
47 $\frac{3}{8}$ x3 $\frac{1}{16}$	3 $\frac{1}{16}$ "	3 $\frac{3}{8}$ " Hex.	6 $\frac{1}{8}$ "	.15
47 $\frac{1}{2}$ x1 $\frac{1}{32}$	1 $\frac{1}{32}$ "	1 $\frac{1}{16}$ " Hex.	6 $\frac{1}{16}$ "	.20
47 $\frac{1}{2}$ x1 $\frac{1}{4}$	1 $\frac{1}{4}$ "	1 $\frac{1}{2}$ " Hex.	6 $\frac{3}{4}$ "	.30
STARTING PUNCHES				
50 $\frac{3}{16}$	1 $\frac{1}{16}$ "	3 $\frac{1}{16}$ " Hex.	4 $\frac{1}{4}$ "	.03
50 $\frac{1}{4}$	3 $\frac{3}{32}$ "	1 $\frac{1}{4}$ " Hex.	4 $\frac{3}{8}$ "	.05
50 $\frac{5}{16}$	1 $\frac{1}{8}$ "	5 $\frac{1}{16}$ " Hex.	5 $\frac{1}{8}$ "	.10
50 $\frac{3}{8}$	3 $\frac{1}{16}$ "	3 $\frac{3}{8}$ " Hex.	5 $\frac{5}{8}$ "	.15
50 $\frac{7}{16}$	7 $\frac{3}{32}$ "	1 $\frac{1}{16}$ " Hex.	6"	.23
50 $\frac{1}{2}$	1 $\frac{1}{4}$ "	1 $\frac{1}{2}$ " Hex.	6 $\frac{1}{2}$ "	.31
LONG TAPER DRIFT PUNCHES				
96 $\frac{1}{4}$	3 $\frac{3}{32}$ "	1 $\frac{1}{4}$ " Hex.	10"	.11
96 $\frac{5}{16}$	1 $\frac{1}{8}$ "	5 $\frac{1}{16}$ " Hex.	10"	.18
96 $\frac{3}{8}$	3 $\frac{1}{16}$ "	3 $\frac{3}{8}$ " Hex.	10"	.27
96 $\frac{7}{16}$	7 $\frac{3}{32}$ "	1 $\frac{1}{16}$ " Hex.	10"	.35
96 $\frac{1}{2}$	1 $\frac{1}{4}$ "	1 $\frac{1}{2}$ " Hex.	10"	.46
96 $\frac{5}{8}$	5 $\frac{1}{16}$ "	19 $\frac{1}{32}$ " Hex.	10"	.73
96 $\frac{3}{4}$	3 $\frac{3}{8}$ "	23 $\frac{1}{32}$ " Hex.	10"	1.02
RIVET CUTTER				
NO.	CUT	STOCK	LGTH.	WT., LBS.
303 $\frac{3}{4}$ x12	7 $\frac{1}{8}$ "	23 $\frac{1}{32}$ " Hex.	12"	1.50
CAPE CHISELS				
72 $\frac{1}{4}$	5 $\frac{3}{32}$ "	1 $\frac{1}{4}$ " Hex.	4 $\frac{1}{2}$ "	.05
72 $\frac{5}{16}$	3 $\frac{1}{16}$ "	5 $\frac{1}{16}$ " Hex.	5"	.09
72 $\frac{3}{8}$	1 $\frac{1}{4}$ "	3 $\frac{3}{8}$ " Hex.	5 $\frac{1}{2}$ "	.15
72 $\frac{1}{2}$	5 $\frac{1}{16}$ "	1 $\frac{1}{2}$ " Hex.	6"	.27
72 $\frac{5}{8}$	3 $\frac{3}{8}$ "	19 $\frac{1}{32}$ " Hex.	6 $\frac{1}{2}$ "	.46
DIAMOND POINT CHISELS				
76 $\frac{1}{4}$	5 $\frac{3}{32}$ "	1 $\frac{1}{4}$ " Hex.	4 $\frac{1}{2}$ "	.06
76 $\frac{5}{16}$	3 $\frac{1}{16}$ "	5 $\frac{1}{16}$ " Hex.	5"	.10
76 $\frac{3}{8}$	1 $\frac{1}{4}$ "	3 $\frac{3}{8}$ " Hex.	5 $\frac{1}{2}$ "	.15
76 $\frac{1}{2}$	5 $\frac{1}{16}$ "	1 $\frac{1}{2}$ " Hex.	6"	.28
76 $\frac{5}{8}$	3 $\frac{3}{8}$ "	19 $\frac{1}{32}$ " Hex.	6 $\frac{1}{2}$ "	.48



ROUND NOSE CHISELS				
NO.	CUT	STOCK	LGTH.	WT., LBS.
80 $\frac{1}{4}$	5 $\frac{3}{32}$ "	1 $\frac{1}{4}$ " Hex.	4 $\frac{1}{2}$ "	.06
80 $\frac{5}{16}$	3 $\frac{1}{16}$ "	5 $\frac{1}{16}$ " Hex.	5"	.10
80 $\frac{3}{8}$	1 $\frac{1}{4}$ "	3 $\frac{3}{8}$ " Hex.	5 $\frac{1}{2}$ "	.14
80 $\frac{5}{8}$	5 $\frac{1}{8}$ "	19 $\frac{1}{32}$ " Hex.	6 $\frac{1}{2}$ "	.49
COLD CHISELS				
86A $\frac{3}{16}$	1 $\frac{1}{4}$ "	3 $\frac{1}{16}$ " Hex.	4 $\frac{1}{4}$ "	.03
86A $\frac{1}{4}$	3 $\frac{1}{16}$ "	1 $\frac{1}{4}$ " Hex.	4 $\frac{1}{2}$ "	.06
86A $\frac{5}{16}$	3 $\frac{3}{8}$ "	5 $\frac{1}{16}$ " Hex.	5"	.10
86A $\frac{3}{8}$	1 $\frac{1}{16}$ "	3 $\frac{3}{8}$ " Hex.	5 $\frac{1}{2}$ "	.17
86A $\frac{7}{16}$	1 $\frac{1}{2}$ "	7 $\frac{1}{16}$ " Hex.	6"	.24
86A $\frac{1}{2}$	5 $\frac{3}{8}$ "	1 $\frac{1}{2}$ " Hex.	6 $\frac{5}{8}$ "	.35
86A $\frac{5}{8}$	3 $\frac{1}{4}$ "	19 $\frac{1}{32}$ " Hex.	7"	.57
86A $\frac{3}{4}$ x7 $\frac{1}{2}$	1 $\frac{1}{8}$ "	23 $\frac{1}{32}$ " Hex.	7 $\frac{1}{16}$ "	.88
86A $\frac{3}{4}$ x12	1 $\frac{1}{8}$ "	23 $\frac{1}{32}$ " Hex.	12 $\frac{3}{16}$ "	1.44
86A $\frac{7}{8}$ x8	1"	15 $\frac{1}{16}$ " Hex.	8 $\frac{3}{16}$ "	1.26
86A $\frac{7}{8}$ x12	1"	15 $\frac{1}{16}$ " Hex.	12 $\frac{3}{16}$ "	1.94
86A1x8	1 $\frac{1}{16}$ "	15 $\frac{1}{16}$ " Hex.	8 $\frac{3}{16}$ "	1.64

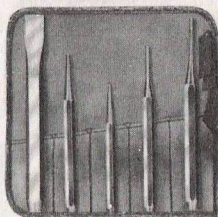


PUNCH AND CHISEL SETS



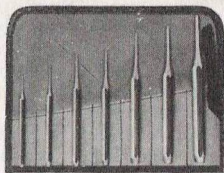
No. 2 Set

A fine selection, providing the twelve punches and chisels used most frequently in practically all types of work. Includes Center Punch $4\frac{1}{8}$; Rivet or Pin Punches $4\frac{1}{4} \times \frac{3}{32}$, $4\frac{7}{16} \times \frac{1}{8}$ and $4\frac{7}{8} \times \frac{3}{16}$; Starting Punches $5\frac{3}{16}$, $5\frac{5}{16}$ and $5\frac{3}{8}$; Cape Chisel $7\frac{5}{16}$; Diamond Point Chisel $7\frac{5}{16}$, and Cold Chisels $86A\frac{1}{4}$, $86A\frac{3}{8}$ and $86A\frac{1}{2}$ in a red Vinyl Kit No. 2402. Weight, 1.62 Lbs.



No. 3 Set

A useful set, including Center Punch $4\frac{1}{8}$; Rivet or Pin Punches $4\frac{7}{16} \times \frac{1}{8}$ and $4\frac{7}{8} \times \frac{3}{16}$; Starting Punch $5\frac{3}{16}$, and Cold Chisel $86A\frac{1}{2}$ in Vinyl Kit No. 2411. Weight, .97 Lb.



No. 47A Set

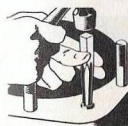
A useful, complete set of seven rivet or pin punches. Includes $4\frac{7}{8} \times \frac{1}{16}$, $4\frac{7}{8} \times \frac{3}{32}$, $4\frac{7}{16} \times \frac{1}{8}$, $4\frac{7}{16} \times \frac{5}{32}$, $4\frac{7}{8} \times \frac{3}{16}$, $4\frac{7}{16} \times \frac{1}{32}$ and $4\frac{1}{2} \times \frac{1}{4}$ in red Vinyl Kit No. 2403. Weight, 1.14 Lbs.

SCREW AND PIPE EXTRACTORS

How to Use



First Drill Hole.



Then Drive in Extractor and Turn Out Broken Object.

9500A



These extractors are the fastest type obtainable for removing broken screws, studs, bolts, pipe, fittings, etc. They are vastly superior to other designs for several reasons: (1) Only three, quick steps are required. (2) Even if hole is drilled clear through, extractor will not chew up object as do other types. (3) Sharp edges bite positively. (4) Gradual taper of flutes prevents wedging and binding. (5) Objects with right or left threads may be removed. (6) Special alloy steel provides long life. You will save precious time and your good disposition on many occasions by getting all nine sizes.

NO.	SIZE OF SMALL END	SIZE OF SHANK	OVER-ALL LENGTH	U.S.S. SCREW, STUD OR BOLT SIZE	DRILL SIZE	MIN. DEPTH OF HOLE	PIPE SIZE	WT., LBS.
9521	$\frac{1}{8}$ "	$\frac{3}{16}$ "	$2\frac{5}{16}$ "	$\frac{1}{4}$, $\frac{5}{16}$	$\frac{1}{8}$ "	$\frac{3}{8}$ "	----	.01
9522	$\frac{11}{64}$ "	$\frac{3}{16}$ "	$2\frac{5}{8}$ "	$\frac{3}{8}$	$\frac{3}{16}$ "	$\frac{1}{2}$ "	----	.02
9523	$\frac{13}{64}$ "	$\frac{1}{4}$ "	$2\frac{7}{8}$ "	$\frac{7}{16}$	$\frac{15}{64}$ "	$\frac{1}{2}$ "	$\frac{1}{8}$ "	.04
9524	$\frac{19}{64}$ "	$\frac{5}{16}$ "	3"	$\frac{1}{2}$, $\frac{9}{16}$	$\frac{5}{16}$ "	$\frac{1}{2}$ "	$\frac{1}{4}$ "	.06
9525	$\frac{11}{32}$ "	$\frac{3}{8}$ "	$3\frac{1}{4}$ "	$\frac{3}{8}$	$\frac{3}{8}$ "	$\frac{5}{8}$ "	$\frac{3}{8}$ "	.10
9525B	$\frac{27}{64}$ "	$\frac{7}{16}$ "	$3\frac{7}{8}$ "	$\frac{3}{4}$	$\frac{15}{32}$ "	$\frac{11}{16}$ "	----	.17
9526	$\frac{1}{2}$ "	$\frac{1}{2}$ "	$4\frac{1}{2}$ "	$\frac{7}{8}$	$\frac{9}{16}$ "	$\frac{11}{16}$ "	$\frac{1}{2}$ "	.23
9527	$\frac{19}{32}$ "	$\frac{5}{8}$ "	$4\frac{7}{8}$ "	$1\frac{1}{8}$	$\frac{21}{32}$ "	$\frac{3}{4}$ "	$\frac{1}{2}$ "	.40
9528	$\frac{23}{32}$ "	$\frac{3}{4}$ "	$5\frac{3}{8}$ "	$1\frac{1}{4}$, $1\frac{3}{8}$	$\frac{13}{16}$ "	$\frac{3}{4}$ "	$\frac{3}{4}$ "	.65
9529	$\frac{31}{32}$ "	1"	$5\frac{1}{2}$ "	$1\frac{1}{2}$	$\frac{17}{16}$ "	$\frac{3}{4}$ "	1"	1.12

†For Broken Alemite Fittings.

No. 9500A Screw Extractor Set

Five popular-size extractors—Nos. 9521, 9522, 9523, 9524 and 9525—with a handy rack for holding all five sizes. Weight, .26 Lb.

PLUMBING TOOLS

In addition to these specialized tools, you will find a great many others in this catalog that are needed for plumbing, heating, ventilating and air conditioning work. Among them are pipe wrenches; flare nut and adjustable wrenches; box, open end and combination wrenches; punches; chisels; pliers; screwdrivers; gear and bearing pullers; ham-

mers; pry bars; tool chests, boxes and kits; and socket wrench sets in $\frac{1}{4}$ ", $\frac{3}{8}$ ", $\frac{1}{2}$ " and larger drives.

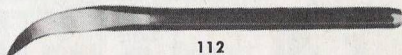
FLOOR OR WOOD CHISELS					
NO.	STOCK SIZE	WIDTH OF CUT	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
57 $\frac{1}{16}$	$\frac{7}{16}$ "	$\frac{5}{8}$ "	4 $\frac{1}{2}$ "	10"	.38
57 $\frac{1}{2}$	$\frac{1}{2}$ "	$\frac{3}{4}$ "	4 $\frac{1}{4}$ "	10"	.54
57 $\frac{3}{8}$	$\frac{15}{32}$ "	1"	3 $\frac{3}{4}$ "	10"	.70
57 $\frac{3}{4}$	$\frac{23}{32}$ "	1 $\frac{3}{16}$ "	3 $\frac{1}{2}$ "	10"	1.00
STAR DRILLS					
13 $\frac{1}{4}$	$\frac{1}{4}$ "	$\frac{1}{4}$ "	---	12"	.16
13 $\frac{5}{16}$	$\frac{1}{4}$ "	$\frac{5}{16}$ "	---	12"	.16
13 $\frac{3}{8}$	$\frac{5}{16}$ "	$\frac{3}{8}$ "	---	12"	.26
13 $\frac{1}{2}$	$\frac{3}{8}$ "	$\frac{1}{2}$ "	---	12"	.38
13 $\frac{5}{8}$	$\frac{7}{16}$ "	$\frac{5}{8}$ "	---	12"	.52
13 $\frac{3}{4}$	$\frac{1}{2}$ "	$\frac{3}{4}$ "	---	12"	.70
13 $\frac{7}{8}$	$\frac{19}{32}$ "	$\frac{7}{8}$ "	---	12"	1.07
13-1	$\frac{23}{32}$ "	1"	---	12"	1.52
SCRATCH AWL					
19	$\frac{3}{16}$ "	---	---	6 $\frac{3}{4}$ "	.05
SOIL PIPE CHISELS					
37 $\frac{1}{2}$	$\frac{1}{2}$ "	$\frac{5}{8}$ "	2 $\frac{1}{8}$ "	5 $\frac{1}{2}$ "	.30
37 $\frac{3}{8}$	$\frac{19}{32}$ "	$\frac{3}{4}$ "	2 $\frac{3}{8}$ "	6"	.48
37 $\frac{3}{4}$	$\frac{23}{32}$ "	$\frac{7}{8}$ "	2 $\frac{5}{8}$ "	6 $\frac{1}{2}$ "	.74
CONCRETE GADS					
84 $\frac{3}{4}$	$\frac{23}{32}$ "	---	2 $\frac{1}{8}$ "	12"	1.42
84 $\frac{7}{8}$	$\frac{13}{16}$ "	---	2 $\frac{1}{2}$ "	12"	1.84
84-1	$\frac{15}{16}$ "	---	2 $\frac{3}{4}$ "	12"	2.4
LEAD-PICKING TOOL					
112	$\frac{1}{2}$ "	$\frac{3}{16}$ "	2 $\frac{3}{8}$ "	9"	.44
BENDING IRONS					
135 $\frac{1}{2}$	$\frac{1}{2}$ "	---	---	10 $\frac{5}{8}$ "	.50
135 $\frac{3}{8}$	$\frac{19}{32}$ "	---	---	10 $\frac{5}{8}$ "	.75

No. 136 Tubing Expander

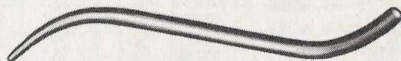
A very handy tool for plumbers and all others who work with tubing. The three steps expand the internal diameters of tubing to $1\frac{1}{4}$ ", $1\frac{3}{8}$ " and $1\frac{1}{2}$ ". Length, $\frac{3}{8}$ ". Weight, .86 Lb.

57 $\frac{1}{16}$ -57 $\frac{3}{4}$ 13 $\frac{1}{4}$ -13-1

19

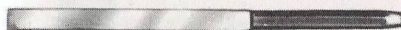
37 $\frac{1}{2}$ -37 $\frac{3}{4}$ 84 $\frac{3}{4}$ -84-1

112

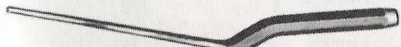
135 $\frac{1}{2}$ -135 $\frac{3}{8}$ 

136

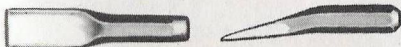
PLUMBING TOOLS



6 1/2 x 11 1/2 - 6 3/8 x 18



14 1/2 x 11 1/2 - 14 3/4 x 14



21 1/2



33 1/2 - 33 3/4



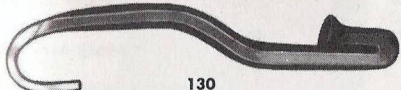
033 1/2 - 033 3/4



109



110



130



131 3/8 - 131 3/4



132L-132R

All are forged from fine alloy steel. Yarning irons are slightly offset for clearance. Long calkers, for calking lead in hub of soil pipe, are ground both inside and out, and their concave blades fit 4" pipe. Water main calkers are ground square, have an offset handle for knuckle clearance, and do a fast job of calking joints in cast iron mains. Left and right calkers are for use near walls or in corners.

SPRING YARNING IRONS

NO.	STOCK SIZE	BLADE THICKNESS	BLADE WIDTH	BLADE LENGTH	OVERALL LENGTH	WT., LBS.
6 1/2 x 11 1/2	1 1/2"	1/16" - 1/8"	5/8"	6 1/2"	11 1/2"	.43
6 5/8 x 12	1 3/32"	3/32" - 5/32"	3/4"	7"	12"	.66
6 3/4 x 18	1 9/32"	3/32" - 5/16"	3/4"	13"	18"	.75

OFFSET YARNING IRONS

14 1/2 x 11 1/2	1 1/2"	1/16" - 3/16"	5/8"	6 3/4"	11 1/2"	.47
14 5/8 x 12	1 3/32"	3/32" - 1/4"	11/16"	7 1/4"	12"	.72
14 5/8 x 18	1 9/32"	3/32" - 1/4"	11/16"	12 3/4"	18"	.93
14 3/4 x 14	2 3/32"	3/32" - 5/16"	3/4"	9 1/2"	14"	1.08

CURVED PONY CALKERS (Inside & Outside)

21 1/2 In	1 1/2"	1/8"	3/4"	1 1/4"	3"	.14
21 1/2 Out	1 1/2"	1/8"	3/4"	1 1/4"	3"	.14

LONG CALKERS (Inside & Outside)

33 1/2 In	1 1/2"	1/8"	3/4"	1 1/2"	5 1/2"	.29
33 1/2 Out	1 1/2"	1/8"	3/4"	1 1/2"	5 1/2"	.29
33 5/8 In	1 9/32"	5/32"	7/8"	1 3/4"	5 3/4"	.45
33 5/8 Out	1 9/32"	5/32"	7/8"	1 3/4"	5 3/4"	.45

OFFSET CALKERS (Inside & Outside)

033 1/2 In	1 1/2"	1/8"	3/4"	1 1/2"	5 5/8"	.30
033 1/2 Out	1 1/2"	1/8"	3/4"	1 1/2"	5 5/8"	.30
033 5/8 In	1 9/32"	1/8"	7/8"	1 5/8"	6 1/4"	.49
033 5/8 Out	1 9/32"	1/8"	7/8"	1 5/8"	6 1/4"	.49

WATER MAIN CALKER

109	2 3/32"	3/16"	1"	2 11/16"	8"	.88
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BROAD CURVED NOSE CALKING IRON

110	1 9/32"	1/8"	1 1/2"	2"	8 1/2"	.71
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CEILING CALKER

130	1 9/32"	5/32"	1 1/16"	1 5/8"	10"	1.20
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LONG GASKET CALKERS

131 5/8	1 9/32"	5/32"	7/8"	4"	9 1/2"	.64
131 3/4	2 3/32"	3/16"	1"	4 1/4"	9 1/2"	.99

LEFT AND RIGHT CALKERS

132L	1 9/32"	5/32"	7/8"	1 5/8"	8 7/8"	.87
132R	1 9/32"	5/32"	7/8"	1 5/8"	8 7/8"	.87

"TOOLMOBILE"® MOBILE TOOL CABINETS

Featuring Interchangeable Drawers

You'll be mighty proud when you own a gleaming, sturdy "Toolmobile"—true mark of a professional tool user. Saving hours by taking needed tools to the job, and preventing tool losses, a "Toolmobile" soon pays for itself.

Biggest feature is the interchangeability of drawers. Easy-to-move drawer runners, that fit into notches spaced every 2" from top to bottom, permit any of three basic sizes of drawers to be arranged in any combination.

MORE BIG "TOOLMOBILE" FEATURES

1. Ruggedly constructed of heavy-gauge welded steel.
2. Critical points strongly reinforced. Round corners, extra heavy channels across bottom, double side walls, hemmed drawer edges and midfront stiffener assure rigidity and proper drawer alignment.
3. Shallow drawer, $21\frac{5}{8}" \times 16" \times 1\frac{1}{2}"$ deep (inside), has perforated sections which can be punched out to form holes for drawer divider bolts.
4. Medium drawer, $21\frac{5}{8}" \times 16" \times 3\frac{1}{2}"$ deep (inside), has "punch-out" bolt holes and reinforced bottom.
5. Deep drawer, $21\frac{5}{8}" \times 16" \times 5\frac{1}{2}"$ deep (inside), has "punch-out" bolt holes and reinforced bottom.
6. Above drawers have outside depths of 2", 4" and 6" to permit various arrangements in the 2"-spaced drawer runner notches. Bottom compartment is 12" deep, which allows also for interchanging drawers.
7. Drawer divider set has two slotted sides and four partitions which form various-sized compartments.
8. Four-roller drawers move at finger's touch. Double-supported roller axles take heavy load.
9. Semi-soft, tough rubber, 5" casters on husky ball-bearing swivel plates—each held by four bolts—roll easily and quietly, and reduce tool jarring.
10. Two casters have handy foot-operated brakes.
11. Single-lock front closes entire cabinet. Folds and slides out of way under top when unlocked.
12. Masonite cover on $18" \times 28"$ top provides excellent working surface and protects cabinet and tools. It is $3\frac{3}{8}"$ above the floor.
13. Rail around three sides of top keeps tools from rolling off and holds socket wrench racks.
14. Two 15" handles make cabinet easy to maneuver.
15. Useful light assembly has flexible gooseneck that reaches over front for lighting drawers, a chrome plated reflector, two outlets and an 8' cord.
16. Finish is lustrous red, with smart chrome trim.

Individual "Toolmobile" Parts

- 9968-1 Shallow Drawer and Runners. Wt., 8.0 Lbs.
 9968-2 Medium Drawer and Runners. Wt., 9.8 Lbs.
 9968-3 Deep Drawer and Runners. Wt., 12 Lbs.
 9968-4 Drawer Divider Set. Wt., .90 Lb.
 9968-5 Complete Light Assembly. Wt., 4.4 Lbs.
 9968-6 Door for Bottom Half. Wt., 4.7 Lbs.

® Registered U. S. Pat. Off.



Complete "Toolmobile" Assemblies

- 9968 Basic Cabinet with Masonite Cover, Drop Front, Lock, Two Keys, Four Casters and Two Handles, Plus 9968-1 Shallow Drawer and Runners, 9968-2 Medium Drawer and Runners, and 9968-4 Drawer Divider Set. Wt., 112 Lbs.
 9968A All Parts in 9968, Plus 9968-3 Deep Drawer and Runners, 9968-5 Light Assembly, and 9968-6 Door for Bottom Half. Wt., 133 Lbs.
 9968B All Parts in 9968, Plus Extra 9968-1 Shallow Drawer and Runners, Extra 9968-2 Medium Drawer and Runners, Two 9968-3 Deep Drawers and Runners, Extra 9968-4 Drawer Divider Set, and 9968-5 Light Assembly. Wt., 159 Lbs.

ALL-PURPOSE TOOL CHESTS

Superior, top-quality tool chests for professional tool users. Great strength and rigidity secured by heavy-gauge sheet steel, welded construction

and reinforcing. Designed for best use of space, with no wasted areas. Strong, telescope-action slides make drawers easy to move. Comfortable grip side handles. Durable red finish. Rounded corners give streamlined appearance. Free nameplate. Following are features of the four chests shown:



9989



9980

No. 9980 Utility Tool Chest

Overall dimensions— $22\frac{1}{4}$ "x 9 "x $6\frac{3}{16}$ " high. Two-compartment tray in top space, $21\frac{7}{8}$ "x $3\frac{3}{8}$ "x $1\frac{13}{16}$ " deep. Large bottom compartment with partition, $21\frac{7}{8}$ "x $8\frac{3}{16}$ "x $6\frac{1}{2}$ " deep at front. Hasp on lid fits over staple on drop front for locking. Wt., 10 Lbs.

No. 9989 Master Tool Chest

Overall dimensions— $20\frac{9}{16}$ "x $11\frac{1}{16}$ "x 9 " high. Hinged tray, $19\frac{1}{16}$ "x 5 "x $1\frac{1}{2}$ " deep, has two compartments and swings up with lid. Fixed tray at back of top space, $20\frac{1}{2}$ "x $4\frac{5}{8}$ "x $3\frac{1}{16}$ " deep. Removable tote tray, $19\frac{1}{16}$ "x $5\frac{1}{16}$ "x $1\frac{1}{2}$ " deep, has two compartments and handle. Large space at bottom, $20\frac{1}{2}$ "x $11\frac{1}{16}$ "x $4\frac{7}{8}$ " deep, is divided by partition. Front plate for locking chest is hinged to lid. Three hinges are full-length piano-type. Wt., 19 Lbs.

No. 9990 Master Tool Chest

Noted for versatility, having provisions for midget and very large tools. Overall dimensions— $24\frac{1}{2}$ "x $11\frac{1}{2}$ "x 13 " high. Two small drawers, each, $4\frac{1}{2}$ "x $10\frac{3}{16}$ "x 1 " deep. Another small drawer, $3\frac{1}{16}$ "x $10\frac{3}{16}$ "x $2\frac{1}{8}$ " deep. Medium drawer, $11\frac{3}{16}$ "x $10\frac{3}{16}$ "x $2\frac{1}{8}$ " deep. Large drawer, $20\frac{3}{8}$ "x $10\frac{3}{16}$ "x $2\frac{1}{4}$ " deep, has two compartments. Hinged tray, $23\frac{3}{8}$ "x $5\frac{1}{16}$ "x $1\frac{1}{2}$ " deep, has three compartments and swings up with lid. Fixed tray at back of top space, $24\frac{1}{16}$ "x $3\frac{1}{2}$ "x $2\frac{1}{2}$ " deep. Large inside space, $24\frac{1}{16}$ "x $11\frac{1}{16}$ "x $5\frac{1}{16}$ " deep, has partitioned section for large heavy-duty sockets. Drop front and a plate hinged to the lid overlap at center over staple for locking chest. Four hinges are full-length piano-type. Wt., 37 Lbs.

No. 9997 Master Tool Chest

Has many features that make it strong, safe, convenient and good-looking. Overall dimensions— 27 "x 12 "x 15 " high. Four medium drawers, each $11\frac{1}{8}$ "x $10\frac{5}{8}$ "x $1\frac{1}{4}$ " deep and partitioned into three compartments. Two large drawers, each $23\frac{1}{4}$ "x $10\frac{3}{4}$ "x $2\frac{3}{4}$ " deep and divided into two sections by sturdy welded partition. Removable tote tray, $21\frac{1}{16}$ "x $8\frac{1}{16}$ " deep, has rigid non-tilt handle and three compartments, two of them suitable for sockets. Top section of chest has three large compartments, one for holding the tote tray. Double-rib reinforced top overlaps balance of chest to make tight seal. Front plate for covering drawers is hinged to lid and swings inside lid when chest is opened. Strong tumbler lock secures chest in three places. Wt., 65 Lbs.



9990



9997

STEEL TOOL BOXES FOR SOCKET SETS

All socket set boxes are made of sturdy heavy-gauge steel and have red baked enamel finish.

No. 4795 Midget Tool Box

For $\frac{1}{4}$ " drive midget sockets, handles and attachments. Keeps smaller tools in orderly array and separated from others. Dimensions, $6\frac{3}{4}$ "x $2\frac{1}{4}$ "x1". Weight, .52 Lb.

No. 5294 Junior Cub Tool Box

Smaller than No. 5295. Holds large number of $\frac{3}{8}$ " drive cub sockets and a few attachments. Dimensions, $10\frac{1}{4}$ "x $2\frac{1}{4}$ "x $1\frac{1}{4}$ ". Weight, .83 Lb.

No. 5295 Cub Tool Box

For $\frac{3}{8}$ " drive cub sockets, handles and attachments. Strength is increased by die-formed one-piece construction, end reinforcing flanges and rounded corners. Has socket compartment and a spring hasp. Dimensions, $17\frac{7}{8}$ "x $5\frac{1}{4}$ "x $1\frac{3}{8}$ ". Weight, 1.70 Lbs.

No. 5494 Junior Standard Tool Box

A smaller box than No. 5495, but has room for a large number of $\frac{1}{2}$ " drive standard sockets and a few handles and attachments. Dimensions, 17"x3"x2". Weight, 1.86 Lbs.

No. 5495 Standard Tool Box

For $\frac{1}{2}$ " drive standard sockets, handles and attachments. Die-formed one-piece construction, reinforced edges and rounded corners all add strength. Has two socket compartments, speeder holder in lid, spring hasp, and husky handle on side. Dimensions, $19\frac{3}{16}$ "x $7\frac{1}{4}$ "x2". Weight, 4.6 Lbs.

No. 5695 Heavy-Duty Tool Box

For $\frac{3}{4}$ " drive heavy-duty sockets, handles and attachments. Construction throughout is extra heavy. Has five convenient compartments. Cover is held shut by two spring catches and a padlock hasp. Handle folds out of way when not in use. Dimensions, $22\frac{1}{2}$ "x8"x $3\frac{3}{4}$ ". Weight, 9.0 Lbs.

No. 5894 Extra Heavy-Duty Tool Box

For 1" square drive extra heavy-duty and $\frac{3}{4}$ " drive heavy-duty sockets, handles and attachments. Made extra heavy throughout — welded, riveted and strongly reinforced. Dimensions, 30"x $8\frac{1}{4}$ "x5". Weight, 14 Lbs.



4795



5294



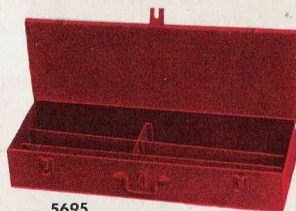
5295



5494



5495



5695



5894

STEEL TOOL BOXES

No. 100HR Hip-Roof Tool Box

For taking tools to job. Removable tote tray has three compartments. Made of heavy-gauge steel. Dimensions, 22"x7 $\frac{3}{8}$ "x8 $\frac{1}{2}$ ". Finish is red. Weight, 10 Lbs.

Nos. 9970 and 9971 Hip-Roof Tool Boxes

Room for amazing number of tools. Made of heavy-gauge steel, with strong full-length hinges. Handy tote tray lifts out. Finish is red. Two sizes available.

NO.	DIMENSIONS	WT., LBS.
9970	20"x6"x5 $\frac{1}{4}$ "	6.7
9971	19"x7"x8 $\frac{3}{4}$ "	9.3

No. 9972 Tool Box

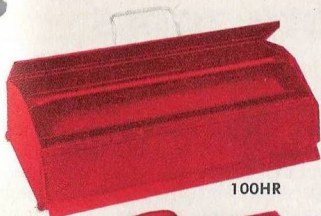
Handy for many types of tool users. Removable tote tray has three compartments. Made of heavy-gauge steel, with full-length hinge. Dimensions, 23"x8"x9". Finish is red. Weight, 13 Lbs.

KITS FOR TOOL SETS

Finest obtainable for storing and carrying tools. Vinyl plastic impregnation offers many advantages. It is noted for long wear, is flexible, won't crack or peel, is scratch and scuff proof, resists grease and oil, and is easy to clean with soap and water. The kits are red, with blue trim. They have strongly stitched seams, heavy tie strings, two grommets for hanging, and tough, crystal clear vinyl plastic pocket covers.

NO.	FOR SET NO.	WIDTH	DEPTH	POCK-ETS	WT., LBS.
2402	2	12 $\frac{7}{8}$ "	7 $\frac{1}{2}$ "	12	.09
2403	47A	7 $\frac{3}{8}$ "	8 $\frac{1}{4}$ "	7	.07
2404	1200H	11 $\frac{3}{8}$ "	10 $\frac{1}{2}$ "	7	.14
2405	1100K	10"	15"	5	.17
2406	3000H	21 $\frac{1}{4}$ "	15 $\frac{1}{2}$ "	10	.35
2407	30000R	10 $\frac{1}{4}$ "	8 $\frac{3}{4}$ "	6	.10
2408	9900D	8 $\frac{1}{4}$ "	9 $\frac{1}{2}$ "	4	.10
2409	3000N	9 $\frac{1}{2}$ "	11 $\frac{3}{4}$ "	5	.12
2410	3300A	9 $\frac{3}{8}$ "	5 $\frac{3}{8}$ "	9	.06
2411	3	5 $\frac{1}{16}$ "	8 $\frac{1}{8}$ "	5	.04
2412	3400G	6 $\frac{3}{4}$ "	11 $\frac{1}{8}$ "	4	.09
2413	1200F	25"	18 $\frac{1}{2}$ "	15	.58
2414	30000A	19"	13 $\frac{1}{8}$ "	10	.28
2415	1200L	12 $\frac{3}{4}$ "	13 $\frac{1}{8}$ "	9	.18
2416	3200D	9 $\frac{1}{8}$ "	5 $\frac{3}{4}$ "	9	.06
2417	3200B	5 $\frac{9}{16}$ "	5 $\frac{3}{4}$ "	5	.04
2418	1100M	18 $\frac{7}{8}$ "	18 $\frac{1}{2}$ "	10	.50
†2450	9900C	7"	9"	3	.16

†Belt-Type Kit, for Carrying Tools on the Job. Made of Red Chrome-Tanned, Top Quality Leather.



100HR



9971



9972



2402-2450

WHERE TO BUY PROTO TOOLS

Leading distributors, jobbers, hardware stores, farm implement dealers and other retailers sell PROTO tools. They are in every section of the United States and elsewhere throughout the entire World.

To make it easy for you to select the tools you need, PROTO stores use modern self-service merchandisers which were developed for your convenience. Some of these merchandisers are wall-type display panels. Others are compact units for

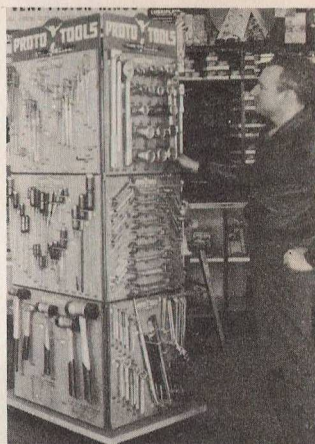
counter and floor displays. All of them hold a big selection of tools, and show tool numbers and opening sizes. PROTO merchandisers, like the representative types illustrated, are your "Tool Headquarters."

You will find it advantageous to do business with sellers of PROTO tools. They render many valuable services, and carry large stocks of high-quality merchandise besides tools, thus providing a one-stop, time-saving source for your needs.

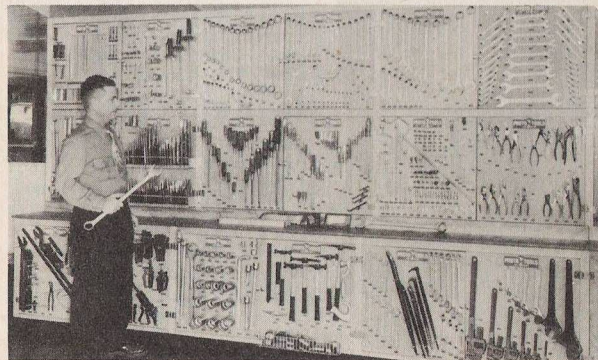


Left—The No. SD4 Rotomat Toolmart is an ultra-modern, rotating counter merchandiser, brightly colored in yellow, red, white and blue. It shows prices, opening sizes and numbers of the many tools displayed.

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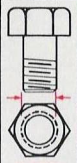
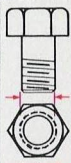
The No. SD2 Super Service Toolmart, a mobile, four-sided merchandiser that displays over 400 types and sizes of PROTO tools.



Left—An impressive "Tool Headquarters," composed of eighteen PROTO wall-type merchandisers. It's easy to choose the tools you need from a neatly arranged display of this type.

Chart of Standard Bolt, Nut and Screw Sizes, Corresponding to Nominal Sizes Marked on PROTO Wrenches and Sockets

To use this chart, locate thread diameter of bolt, nut or screw in extreme left or right column. Then move across to box which has proper identification of bolt, nut or screw at top of vertical column. The size in this particular box is the nominal opening size in inches of the PROTO wrenches and sockets that will fit.

NOMINAL OPENING SIZE OF WRENCH OR SOCKET IN INCHES TO FIT STANDARD BOLT HEADS, NUTS AND SCREW HEADS											
 THREAD DIAMETER OF BOLT, NUT OR SCREW	AMERICAN STANDARD SERIES										 THREAD DIAMETER OF BOLT, NUT OR SCREW
	HEAVY		REGULAR		LIGHT		HEX. FULL FINISHED CAP SCREW HEADS	SQ. & HEX. MACHINE SCREW NUTS & SQ. STOVE BOLT NUTS	SQ. SET SCREW HEADS	SQ. LAG BOLT HEADS	
	SQ. & HEX. BOLT HEADS	SQ. NUTS & HEX. NUTS, JAM NUTS & SLOTTED NUTS	SQ. & HEX. BOLT HEADS (MACH. BOLT HEADS)	SQ. NUTS & HEX. NUTS, JAM NUTS & SLOTTED NUTS	HEX. NUTS, JAM NUTS, SLOTTED NUTS & CAS- TLE NUTS NAT. FINE (SAE THR.)						
		USS NUTS									
#0 & 1	---	---	---	---	---	---	---	5/32	---	---	#0 & 1
#2 & 3	---	---	---	---	---	---	---	3/16	---	---	#2 & 3
#4	---	---	---	---	---	---	---	1/4	---	---	#4
#5 & 6	---	---	---	---	---	---	---	5/16	---	---	#5 & 6
#8	---	---	---	---	---	---	---	11/32	---	---	#8
#10	---	---	---	---	---	---	---	3/8	---	5/16	#10
#12	---	---	---	---	---	---	---	7/16	---	---	#12
1/4"	---	1/2	3/8	7/16	7/16	7/16	7/16	7/16	1/4	3/8	1/4"
5/16"	---	19/32	1/2	9/16	1/2	1/2	1/2	9/16	5/16	1/2	5/16"
3/8"	---	11/16	9/16	5/8	9/16	9/16	9/16	5/8	3/8	9/16	3/8"
7/16"	---	25/32	5/8	3/4	5/8	5/8	5/8	---	7/16	5/8	7/16"
1/2"	7/8	7/8	3/4	13/16	3/4	3/4	3/4	---	1/2	3/4	1/2"
9/16"	15/16	15/16	7/8	7/8	7/8	7/8	13/16	---	9/16	7/8	9/16"
5/8"	1 1/16	1 1/16	15/16	1	15/16	7/8	---	---	5/8	15/16	5/8"
3/4"	1 1/4	1 1/4	1 1/8	1 1/8	1 1/16	1	---	---	3/4	1 1/8	3/4"
7/8"	1 7/16	1 7/16	1 5/16	1 5/16	1 1/4	1 1/8	---	---	7/8	1 5/16	7/8"
1"	1 5/8	1 5/8	1 1/2	1 1/2	1 7/16	1 5/16	---	---	1	1 1/2	1"
1 1/8"	1 13/16	1 13/16	1 1/16	1 1/16	1 5/8	1 1/2	---	---	1 1/8	1 1/16	1 1/8"
1 1/4"	2	2	1 7/8	1 7/8	1 13/16	1 11/16	---	---	1 1/4	1 7/8	1 1/4"
1 3/8"	2 3/16	2 3/16	2 1/16	2 1/16	2	---	---	---	1 3/8	---	1 3/8"
1 1/2"	2 3/8	2 3/8	2 1/4	2 1/4	2 3/16	---	---	---	1 1/2	---	1 1/2"
1 5/8"	2 9/16	2 9/16	2 1/2	2 1/2	---	---	---	---	---	---	1 5/8"
1 3/4"	2 3/4	2 3/4	2 5/8	2 5/8	---	---	---	---	---	---	1 3/4"
1 7/8"	2 15/16	2 15/16	2 13/16	2 13/16	---	---	---	---	---	---	1 7/8"
2"	3 1/8	3 1/8	3	3	---	---	---	---	---	---	2"
2 1/4"	3 1/2	3 1/2	3 3/8	3 3/8	---	---	---	---	---	---	2 1/4"
2 1/2"	3 7/8	3 7/8	3 3/4	3 3/4	---	---	---	---	---	---	2 1/2"
2 3/4"	4 1/4	4 1/4	4 1/8	4 1/8	---	---	---	---	---	---	2 3/4"
3"	4 5/8	4 5/8	4 1/2	4 1/2	---	---	---	---	---	---	3"

4- and 8-Point Sockets Are Used on Square Bolt Heads, Nuts and Screw Heads.

6- and 12-Point Sockets Are Used on Hexagon Bolt Heads, Nuts and Screw Heads.

†Does Not Apply to USS Nuts.



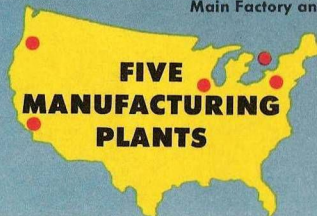
Milwaukie (Portland), Ore., Factory



Schiller Park (Chicago), Ill., Factory



Main Factory and Offices in Los Angeles, Calif.



London, Ont., Factory (PROTO TOOLS of CANADA, Ltd.)



Jamestown, N. Y., Factory and Eastern Warehouse

Founded in 1907, PROTO is the World's largest producer today of high-quality hand service tools. Leadership is attributable mainly to the *professional* quality of

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